INJURY EXPERIENCE IN THE METAL INDUSTRIES, 1956 AND 1957

By John C. Machisak, Naomi W. Kearney,
and Elizabeth B. Dixon

* * * * * * * * * * information circular 7977

March 3, 1849

UNITED STATES DEPARTMENT OF THE INTERIOR
Fred A. Seaton, Secretary

BUREAU OF MINES
Marling J. Ankeny, Director

This publication has been cataloged as follows:

U.S. Bureau of Mines.

Injury experience in the metal industries, 1956 and 1957–
[Washington]

v. tables. 26 cm. (*Its* Information circular)

For earlier years see its "Injury experience in the metal and nonmetal industries."

1. Mine accidents. I. Title. II. Title; Metal industries, Injury experience in. (Series)

TN23.U71 no. 7977, etc. 622.06173

U.S. Dept. of the Int. **Library.**

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington 25, D.C. - Price 50 cents

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INJURY EXPERIENCE IN THE METAL INDUSTRIES, 1956 and 1957[1]

By

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Introduction and Summary

THIS INFORMATION CIRCULAR contains 1956 and 1957 injury experience and employment data for metal mines in the United States and Alaska. Unlike previous publications, this report covers only metal mining and contains statistical data on injuries and employment pertinent to metal mines and mills reporting voluntarily to the Bureau of Mines on an annual basis.

Injury and employment data for the nonmetal industries, which from 1911 through 1955 were published in the same series as the metal industries, for the first time will be published separately as an information circular entitled "Injury Experience in the Nonmetal Industries, 1956 and 1957."

The Bureau of Mines is authorized to make requests for injury and employment data, and the information submitted by operators of metal mines and mills is a step forward in promoting safety in the metal-mining industry. Every effort has been made to make this coverage as complete as possible.

The metal mines identified in this publication are classified according to the kind of mineral ores mined—copper, iron, gold-silver lode, lead-zinc, gold placer, and miscellaneous metals. A breakdown of miscellaneous metals by commodities is shown in tables 35 and 36.

Statistics on injuries and employment at metal mines have been compiled by the Bureau since 1911. From 1911 through 1914 classification of nonfatal injuries was shown in two groups: "Serious," which disabled a workman for more than 20 days, and "slight" which caused disability not exceeding 20 days but longer than the remainder of the day on which the accident occurred. From 1915 through 1929 "serious" injuries were those resulting in permanent disability, and "temporary total" injuries were those causing disability for more than 14 days. Beginning in 1930 all temporary injuries have been shown in a separate group, which includes all temporary total injuries causing disability for more than the remainder of the day on which the accident occurred.

Nonfatal injuries are shown in this publication by severity of injury as follows: *Permanent total*, *permanent partial* and *temporary total*. All injury-frequency rates shown herein have been calculated on the basis of the number of disabling injuries per million man-hours of employment.

Injury-severity rates have been calculated on the basis of the number of days lost from disabling per million man-hours of exposure.

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Data on injuries and employment at metal mines in the United States and Alaska for 1956 and 1957 are presented under the following general sections:

(*A*) *General injury experience:*
Tables 1–6: Current data on the number of injuries, injury-frequency and severity rates, related employment data, cause, work location, and degree of injury

(*B*) *Injury experience at different kinds of mines, including metallurgical plants:*
Tables 7–16: Current data on number of injuries and related employment by work location, cause, degree of injury, and injury-frequency rates in the metal industry, including metallurgical plants.

(*C*) *Injury experience, by States and Alaska:*
Tables 17–34: Current data on the number of injuries, injury-frequency and severity rates, and related employment, by work location, cause, and degree of injury.

(*D*) *Selected injury data:*
Tables 35–46: Current injury experience and employment data at miscellaneous metal mines, by commodity. Tables 37–46 also include injury experience at placer mines and at metal mines, by mining method.

(*E*) *Historical injury experience:*
Table 47: Employment and injury data on metal mines, 1931–57.

ACKNOWLEDGMENTS

The Bureau of Mines acknowledges and deeply appreciates the cooperation it has received. The data supplied on injuries and related employment in connection with metal mines has contributed greatly to the promotion of safety in the mineral industries in the United States and Alaska.

GENERAL INJURY EXPERIENCE

(Tables 1–6)

The overall injury experience in the metal mining industry in the United States and Alaska showed marked improvement in 1957 over 1956. Fatal injuries for 1957 were 71, compared with 89 reported in 1956—a decrease of 20 percent. Nonfatal injuries were 921 fewer (17 percent) in 1957 than the number reported in the preceding year. The combined (fatal and nonfatal) injury-frequency rate of 32.53 in 1957 represents a 16-percent decrease from the 1956 rate.

Reports received from operators in 1957 revealed an increase in active operations and in number of men employed. Men employed totaled 68,457—a slight increase over the preceding year, and the number of active mines reported was a gain of 275 over 1956.

The tables presented in this publication give a breakdown of injury and employment data by department—underground, surface (at underground mines), and opencut. Opencut-mine data includes surface operations directly connected with opencut mines. Surface operations at underground mines are shown separately under the "surface" column.

GENERAL INJURY DATA

TABLE 1.—*Salient statistics on injuries, injury-frequency and severity rates, and employment in the metal industries of the United States and Alaska, 1952–56*

	1952	1953	1954	1955	Officeworkers 1955	Grand total 1955	1956	Officeworkers 1956	Grand total 1956
Injuries:									
Fatal	117	92	86	79	....	79	89	....	89
Nonfatal:									
Permanent total	10	....	9	9	....	9	5	....	5
Permanent partial	298	287	231	290	....	290	282	....	282
Temporary	6,376	5,877	4,754	5,538	3	5,541	5,188	....	5,188
Total nonfatal	6,684	6,164	4,994	5,837	3	5,840	5,475	....	5,475
Grand total	6,801	6,256	5,080	5,916	3	5,919	5,564	....	5,564
Injury-frequency rates per million man-hours:									
Fatal	0.74	0.59	0.66	0.58	....	0.55	0.62	....	0.58
Nonfatal	42.13	39.36	38.27	42.62	0.42	40.55	37.91	....	35.54
Total	42.87	39.95	38.93	43.20	0.42	41.10	38.53	....	36.12
Severity rates per million man-hours:[1]									
Fatal	....	....	....	....	....	....	3,768.27	....	3,530.29
Nonfatal	....	....	....	....	....	....	2,036.22	....	1,907.62
Total	....	....	....	....	....	....	5,804.49	....	5,437.91
Active mines	2,750	2,740	2,700	1,635	....	1,635	1,754	....	1,754
Men employed	74,626	72,529	66,610	65,143	3,192	68,335	68,273	4,315	72,588
Average days active	265	270	245	263	277	263	264	279	265
Man-days worked	19,770,257	19,559,252	16,293,664	17,113,180	883,283	17,996,463	18,017,282	1,203,972	19,221,254
Man-hours worked	158,648,566	156,604,937	130,488,488	136,950,227	7,071,793	144,022,020	144,406,908	9,639,685	154,046,593
Average hours per man per day	8.02	8.01	8.01	8.00	8.01	8.00	8.01	8.01	8.01
Average hours per man per year	2,126	2,159	1,959	2,102	2,215	2,108	2,115	2,234	2,122

[1] Severity rates computed on all metal mines except placer mines.

TABLE 2.—*Salient statistics on injuries, injury-frequency and severity rates, and employment in the metal industries of the United States and Alaska, 1953–57*

	1953	1954	1955	Officeworkers 1955	Grand total 1955	1956	Officeworkers 1956	Grand total 1956	1957	Officeworkers 1957	Grand total 1957
Injuries:											
Fatal	92	86	79		79	89		89	71		71
Nonfatal:											
Permanent total		9	9		9	5		5	5		5
Permanent partial	287	231	290		290	282		282	227		227
Temporary	5,877	4,754	5,538	3	5,541	5,188		5,188	4,322	2	4,324
Total nonfatal	6,164	4,994	5,837	3	5,840	5,475		5,475	4,554	2	4,556
Grand total	6,256	5,080	5,916	3	5,919	5,564		5,564	4,625	2	4,627
Injury-frequency rates, per million man-hours:											
Fatal	0.59	0.66	0.58		0.55	0.62		0.58	0.50		0.47
Nonfatal	39.36	38.27	42.62	0.42	40.55	37.91		35.54	32.03	0.26	30.39
Total	39.95	38.93	43.20	.42	41.10	38.53		36.12	32.53	.26	30.86
Severity rates per million man-hours:[1]											
Fatal						3,768.27		3,530.29	2,961.36		2,807.99
Nonfatal						2,036.22		1,907.62	1,835.30	7.47	1,740,64
Total						5,804.49		5,437.91	4,796.66	7.47	4,548.63
Active mines	2,740	2,700	1,635		1,635	1,754		1,754	2,029		2,029
Men employed	72,529	66,610	65,143	3,192	68,335	68,273	4,315	72,588	68,457	3,676	72,133
Average days active	270	245	263	277	263	264	279	265	259	264	260
Man-days worked	19,559,252	16,293,664	17,113,180	883,283	17,996,463	18,017,282	1,203,972	19,221,254	17,750,709	969,848	18,720,557
Man-hours worked	156,604,937	130,488,488	136,950,227	7,071,793	144,022,020	144,406,908	9,639,685	154,046,593	142,180,525	7,757,267	149,937,792
Average hours per man per day	8.01	8.01	8.00	8.01	8.00	8.01	8.01	8.01	8.01	8.00	8.01
Average hours per man per year	2,159	1,959	2,102	2,215	2,108	2,115	2,234	2,122	2,077	2,110	2,079

[1] Severity rates computed on all metal mines except placer mines.

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TABLE 3.—*Comparative fatal and non-fatal-injury data for metal mines in the United States and Alaska, 1956*

EXCLUDING OFFICEWORKERS

	Mines with fatal injuries	Mines without fatal injuries	All metal mines
Active mines	172	1, 582	1, 754
Men employed	20, 984	47, 289	68, 273
Average men per mine	122	30	39
Percentage of total employees	30. 74	69. 26	100. 00
Average days active	287	253	264
Man-days worked	6, 030, 156	11, 987, 126	18, 017, 282
Percent of total man-days	33. 47	66. 53	100. 00
Man-hours worked	48, 240, 041	96, 166, 867	144, 406, 908
Percent of total man-hours	33. 41	66. 59	100. 00
Average hours worked per man per year	2, 299	2, 034	2, 115
Fatalities	89	------------	89
Nonfatal injuries	2, 036	3, 439	5, 475
Fatality rate per million man-hours	1. 84	------------	. 62
Nonfatal rate per million man-hours	42. 21	35. 76	37. 91

INCLUDING OFFICEWORKERS

	Mines with fatal injuries	Mines without fatal injuries	All metal mines
Active mines	172	1, 582	1, 754
Men employed	22, 718	49, 870	72, 588
Average men per mine	132	32	41
Percentage of total employees	31. 30	68. 70	100. 00
Average days active	287	255	265
Man-days worked	6, 519, 560	12, 701, 694	19, 221, 254
Percent of total man-days	33. 92	66. 08	100. 00
Man-hours worked	52, 155, 264	101, 891, 329	154, 046, 593
Percent of total man-hours	33. 86	66. 14	100. 00
Average hours worked per man per year	2, 296	2, 043	2, 122
Fatalities	89	------------	89
Nonfatal injuries	2, 036	3, 439	5, 475
Fatality rate per million man-hours	1. 71	------------	. 58
Nonfatal rate per million man-hours	39. 04	33. 75	35. 54

TABLE 4.—*Comparative fatal and non-fatal-injury data for metal mines in the United States and Alaska, 1957*

EXCLUDING OFFICEWORKERS

	Mines with fatal injuries	Mines without fatal injuries	All metal mines
Active mines	63	1, 966	2, 029
Men employed	19, 737	48, 720	68, 457
Average men per mine	313	25	34
Percentage of total employees	28. 83	71. 17	100. 00
Average days active	292	246	259
Man-days worked	5, 764, 315	11, 986, 394	17, 750, 709
Percent of total man-days	32. 47	67. 53	100. 00
Man-hours worked	46, 106, 592	96, 073, 933	142, 180, 525
Percent of total man-hours	32. 43	67. 57	100. 00
Average hours worked per man per year	2, 336	1, 972	2, 077
Fatalities	71	--------------	71
Nonfatal injuries	1, 844	2, 710	4, 554
Fatality rate per million man-hours	1. 54	--------------	. 50
Nonfatal rate per million man-hours	39. 99	28. 21	32. 03

INCLUDING OFFICEWORKERS

	Mines with fatal injuries	Mines without fatal injuries	All metal mines
Active mines	63	1, 966	2, 029
Men employed	20, 932	51, 201	72, 133
Average men per mine	332	26	36
Percentage of total employees	29. 02	70. 98	100. 00
Average days active	291	247	260
Man-days worked	6, 097, 035	12, 623, 522	18, 720, 557
Percent of total man-days	32. 57	67. 43	100. 00
Man-hours worked	48, 767, 749	101, 170, 043	149, 937, 792
Percent of total man-hours	32. 53	67. 47	100. 00
Average hours worked per man per year	2, 330	1, 976	2, 079
Fatalities	71	--------------	71
Nonfatal injuries	1, 845	2, 711	4, 556
Fatality rate per million man-hours	1. 46	--------------	. 47
Nonfatal rate per million man-hours	37. 83	26. 80	30. 39

TABLE 5.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1956*

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [2]	Temporary total [3]	Total nonfatal	All injuries
UNDERGROUND MINES						
Underground:						
Falls of rock or ore:						
While mining	9		6	153	159	168
While loading	2			28	28	30
While testing or taking down back	4		3	74	77	81
While setting or removing timbers or other supports	4		7	46	53	57
While preparing or installing rock bolts	1			13	13	14
All other falls of rock or ore, n.e.c	3		9	67	76	79
Falls of rock or ore from back, bank, wall, side, rib or pillar:						
While mining	5		4	66	70	75
While loading			2	5	7	7
While testing or taking down back	1			25	25	26
While setting or removing timbers or other supports		1	3	24	28	28
While preparing or installing rock bolts				5	5	5
While moving machinery from one working place to another	1		1		1	2
From pressure bumps or burts	1		1	9	10	11
While moving, setting up, or operating a continuous mining machine				3	3	3
All other falls of rock or ore from back, etc., n.e.c	2		12	31	43	45
Rushes, rolls or slides of rock or ore	4		3	187	190	194
Falling material or objects other than rock or ore:						
Timbers or other supports			2	32	34	34
Materials or objects dropped or thrown by coworkers	1		1	10	11	12
Rolling, shifting, or sliding materials or objects			7	125	132	132
All other falling materials or objects, n.e.c	1		3	52	55	56
Slips or falls of persons:						
On same level:						
While escaping from another hazard				12	12	12
While handling materials or objects			3	101	104	104
From handtools slipping or breaking				8	8	8
While operating or moving machinery			2	29	31	31
All other on same level, n.e.c			4	143	147	147
From an elevation:						
While escaping another hazard				5	5	5
While handling materials				26	26	26
While operating or moving machinery			1	4	5	5
Falls of persons down chute, winze, raise, or manway	3		1	30	31	34
Due to failure of scaffold, ladders, etc	1		7	49	56	57
All other from an elevation, n.e.c	3		6	93	99	102
Handling materials:						
Supports, stulls, ties, or timbers	1		5	270	275	276
Rock			5	150	155	155
Rails			3	32	35	35
Wire or wire rope			4	32	36	36
Flying particles while loading car of rock or ore				21	21	21
Flying particles while handling all other materials			1	68	69	69
All other handling materials, n.e.c	1		8	247	255	256
Handtools:						
Picks				28	28	28
Axes or hatchets			2	36	38	38
Hammers or sledges			1	34	35	35
Crowbars or bars				70	70	70

See footnotes at end of table.

TABLE 5.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1956*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [2]	Temporary total [3]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Underground—Continued						
Handtools—Continued						
Shovels				7	7	7
Saws				6	6	6
All tools in hands of fellow workers				9	9	9
Flying particles from handtools or objects worked on			4	70	74	74
All other handtools, n.e.c			2	43	45	45
Stepping or kneeling on sharp or loose objects:						
Stepping on nails or other sharp objects				68	68	68
Stepping on loose objects			2	73	75	75
Knee or hand injuries while working on all fours				6	6	6
Striking or bumping against objects			1	23	24	24
Haulage:						
Mine-gage haulage:						
Struck, run over, or squeezed between cars or motors:						
Coupling or uncoupling			2	29	31	31
Switching, spragging, blocking, or braking			2	8	10	10
Pulling, pushing, or dropping			1	15	16	16
Operating or riding	1		2	18	20	21
All other struck, run over, etc., n.e.c	2		4	38	42	44
Squeezed between car or motor and back, side or timber:						
Coupling or uncoupling			1	12	13	13
Switching, spragging, blocking, or braking				10	10	10
Pulling, pushing, or dropping			3	29	32	32
Operating or riding	2		4	36	40	42
All other squeezed between car, etc., n.e.c	2		3	43	46	48
Derailments			1	23	24	24
Rerailing cars or motors			3	45	48	48
Collisions (cars or motors not under control)			2	12	14	14
Runaways (cars or motors not under control)	2			7	7	9
Falling, slipping, or jumping in or from cars or motors				17	17	17
Shuttle cars of mobile electric trucks:						
Struck or run over				3	3	3
Squeezed between shuttle cars or mobile electric trucks and back, side, machine, etc	2		1	11	12	14
All other shuttle cars, etc., n.e.c				14	14	14
Miscellaneous haulage:						
Coupling or uncoupling (cars not moving)				10	10	10
Ropes or cables on haulage			4	16	20	20
Slips or strains from pulling, pushing, or dropping cars by hand			1	45	46	46
Flying particles on haulage			1	7	8	8
All other miscellaneous haulage, n.e.c	1		3	67	70	71
Standard-gage haulage (railway)	1		2	3	5	6
Gasoline or diesel trucks, tractors, etc				3	3	3
Slips or falls from or while getting on or off trucks, tractors, etc				9	9	9
Explosions of gas or dust:						
High explosives (including permissible)				2	2	2

See footnotes at end of table.

TABLE 5.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1956*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [2]	Temporary total [3]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Underground—Continued						
Explosives:						
Premature shot or blast	2	1	1	4	6	8
Charging or tamping			1		1	1
Misfire or digging into unexploded holes		1	1	4	6	6
Flying fragments	1		1	14	15	16
Suffocation from explosives smoke				9	9	9
All other explosives, n.e.c	1		1	12	13	14
Electricity: (caused by current, including sparks or flashes):						
Trolley wire or pole				5	5	5
Transformers, generators, etc				1	1	1
Other permanent or semipermanent lighting circuits	2			3	3	5
Mine motors or shuttle cars				1	1	1
Cutout switches or junction boxes	1					1
Machinery:						
While moving mining machines				2	2	2
While setting up mining machines				1	1	1
While operating mining machines			1	3	4	4
Belt conveyors				2	2	2
Chain, bucket, or shaker conveyors			1	14	15	15
Loading machines (including self-loading heads)			3	43	46	46
While moving loading machines and self-loading heads				12	12	12
Scraper conveyors			3	37	40	40
Power drills (except for installing rock bolts)			8	194	202	202
Power drills (used for installing rock bolts)				3	3	3
Power equipment (except drills) used for installing rock bolts			6	10	16	16
Power shovels, draglines, bull-dozers, and buckets			6	17	23	23
While moving any machine, except mining or loading machine			3	54	57	57
Flying particles set in motion by machinery (except rock bolting equipment)			1	78	79	79
All other machinery, n.e.c			6	69	75	75
Suffocation (no flame or smoldering):						
From natural mine gases	3			10	10	13
From foreign gases (gasoline fumes, etc)				2	2	2
Miscellaneous causes:						
Flying particles from draft or wind				16	16	16
Carbide (gas or burns from)	2			3	3	5
Acetylene or electric welding (burns, flashes, or flying particles)				7	7	7
Irritations and burns from battery fluid or corrosive materials				22	22	22
All other miscellaneous, n.e.c			2	104	106	106
Total underground	73	3	211	4, 036	4, 250	4, 323
Shaft and slope:						
Falls of rock or ore				7	7	7
Falls of rock or ore from back, wall or side				8	8	8
Falling material or objects, other than rock or ore:						
Falling cages, skips, or buckets			1	4	5	5
All other falling materials or objects			1	3	4	4
Slips or falls of persons:						
On same level:						
While handling materials or objects				1	1	1
All other on same level, n.e.c				2	2	2

See footnotes at end of table.

TABLE 5.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1956*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [2]	Temporary total [3]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Shaft and slope—Continued						
Slips or falls of persons—Continued						
From an elevation:						
Falls of persons down shaft or slope	1					1
Handling materials:						
All other handling materials, n.e.c.			1	12	13	13
Hand tools				2	2	2
Stepping or kneeling on sharp or loose objects				1	1	1
Striking or bumping against objects				1	1	1
Haulage:						
Mine-gage haulage:						
Struck, run over, or squeezed between cars or motors:						
Coupling or uncoupling			1	1	2	2
Pulling, pushing, or dropping				1	1	1
Operating or riding			1	4	5	5
All other struck, run over, etc., n.e.c.			1	11	12	12
Squeezed between car or motor and back, side or timber:						
All other squeezed between car, etc., n.e.c.			1	3	4	4
Derailments				2	2	2
Rerailing cars or motors				1	1	1
Collisions (cars or motors under control)				1	1	1
Runaways (cars or motors not under control)				1	1	1
Slips or strains from pulling, pushing or dropping cars by hand				6	6	6
Shuttle cars of mobile electric trucks				5	5	5
Riding or getting on or off conveyor belts				4	4	4
Miscellaneous haulage				16	16	16
Standard-gage haulage (railway)				1	1	1
Machinery			1	10	11	11
Miscellaneous causes				4	4	4
Total shaft and slope	1		8	112	120	121
Total underground, shaft and slope	74	3	219	4, 148	4, 370	4, 444
Surface:						
Rushes, rolls or slides of rock or ore				4	4	4
Falling material or objects other than rock or ore:						
Timbers or other supports				3	3	3
Rolling, shifting, or sliding materials or objects				8	8	8
All other falling materials or objects, n.e.c.				5	5	5
Slips or falls of persons:						
On same level:						
While handling material or objects			1	14	15	15
While operating or moving machinery				3	3	3
All other on same level, n.e.c.				60	60	60
From an elevation:						
While handling materials			1	7	8	8
Due to failure of scaffolds, ladders, etc.	2			4	4	6
All other from an elevation, n.e.c.				16	16	16
Handling materials:						
Supports, stulls, ties, or timbers			2	34	36	36
Rock			1	10	11	11
Rails				5	5	5
Wire or wire rope				6	6	6
All other handling materials, n.e.c.			5	120	125	125

See footnotes at end of table.

Table 5.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1956*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [2]	Temporary total [3]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Surface—Continued						
Handtools:						
Picks				4	4	4
Hammers or sledges				4	4	4
Crowbars or bars			1	3	4	4
Saws				2	2	2
Flying particles from handtools or objects worked on				4	4	4
All other handtools			3	25	28	28
Stepping or kneeling on sharp or loose objects:						
Stepping on nails or other sharp objects				2	2	2
Stepping on loose objects				10	10	10
Striking or bumping against objects				4	4	4
Haulage:						
Mine-gage haulage:						
Struck, run over, or squeezed between cars or motors:						
Pulling, pushing or dropping				2	2	2
Operating or riding				1	1	1
All other, struck, run over, etc., n.e.c				1	1	1
Squeezed between cars or motor and back, side, or timbers:						
Pulling, pushing, or dropping				1	1	1
All other squeezed between car, etc., n.e.c			1		1	1
Rerailing cars or motors				4	4	4
Miscellaneous haulage:						
Coupling or uncoupling (cars not moving)				2	2	2
Ropes or cables on haulage			1	1	2	2
Slips or strains from pulling or dropping cars by hand				9	9	9
All other miscellaneous haulage				9	9	9
Standard gage haulage	1			9	9	10
Gasoline or diesel trucks, tractors, etc	2			23	23	25
Explosives:						
Flying fragments				3	3	3
Electricity (caused by current, including sparks or flashes):						
Mining and loading machine	1			2	2	3
Cutout switches or junction boxes				2	2	2
Machinery:						
Scraper conveyors			1	2	3	3
Power drills (except for installing rock bolts)			1	6	7	7
Power shovels, draglines, bulldozers, and buckets				3	3	3
Stationary surface machinery			4	17	21	21
While moving any machine except mining or loading machines				6	6	6
Flying particles set in motion (except rock bolting equipment)			1	2	3	3
All other machinery, n.e.c			3	22	25	25
Suffocation (no flame or smoldering):						
From foreign gases (gasoline fumes, etc.)				2	2	2
Mine fires or suffocation from fires:						
Other fires:						
Other equipment or material				1	1	1

See footnotes at end of table.

TABLE 5.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause and degree of injury, 1956*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [2]	Temporary total [3]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Surface—Continued						
Miscellaneous causes:						
Acetylene or electric welding (burns, flashes or flying particles)				17	17	17
Irritations and burns from battery fluid or corrosive material				9	9	9
All other miscellaneous, n.e.c	1			66	66	67
Total surface	7		26	579	605	612
Total underground, shaft and slope, and surface	81	3	245	4, 727	4, 975	5, 056
OPENCUT MINES						
Fall of rock or ore from bank, wall, or side:						
While mining	1			4	4	5
While loading	2			3	3	5
All other falls of rock from back, etc., n.e.c			2	2	4	4
Rushes, rolls, or slides of rock or ore				4	4	4
Falling material or objects, other than rock or ore:						
Rolling, shifting, or sliding materials or objects			1	10	11	11
All other falling materials or objects n.e.c			2	5	7	7
Slips or falls of person:						
On same level:						
While handling materials or objects				6	6	6
All other on same level, n.e.c				25	25	25
From an elevation:						
While escaping another hazard				2	2	2
While operating or moving machinery				7	7	7
All other from an elevation, n.e.c			1	23	24	24
Handling material:						
Supports, stulls, ties, or timbers				8	8	8
Rock				7	7	7
Rails			2	3	5	5
Wire or wire rope			2	8	10	10
Flying particles while handling all other materials				10	10	10
All other handling materials, n.e.c			5	69	74	74
Handtools:						
Picks				2	2	2
Hammers or sledges				4	4	4
Crowbars or bars				5	5	5
Flying particles from handtools or objects worked on			1	4	5	5
All other handtools, n.e.c			1	9	10	10
Stepping or kneeling on sharp or loose objects:						
Stepping on nails or other sharp objects				3	3	3
Stepping on loose objects				24	24	24
Haulage:						
Mine-gage haulage:						
Struck, run over, or squeezed between cars or motors:						
Coupling or uncoupling			2		2	2
Pulling, pushing or dropping				2	2	2
Squeezed between cars or motors and back, side, or timber:						
Rerailing cars or motors				2	2	2
Runaways (cars or motors not under control)				1	1	1

See footnotes at end of table.

TABLE 5.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1956*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [2]	Temporary total [3]	Total nonfatal	All injuries
OPENCUT MINES—Continued						
Haulage—Continued						
Mine-gage haulage—Continued						
Squeezed between car or motor and back, side, or timber:						
Falling, slipping, or jumping in or from cars or motors				3	3	3
All other miscellaneous haulage			1	6	7	7
Standard-gage haulage	1	1	4	11	16	17
Gasoline or deisel trucks, tractors, etc	2		2	51	53	55
(Slips or falls from or while getting on or off trucks, tractors), etc				20	20	20
Explosives:						
Flying fragments		1		3	4	4
Insufficient warning or improper blasting lines			1		1	1
All other explosives, n.e.c				2	2	2
Electricity (caused by current, including sparks or flashes):						
Other permanent or semipermanent lighting circuits				1	1	1
Mining and loading machines				3	3	3
Machinery:						
Belt conveyors			1	1	2	2
Chain, bucket, or shaker conveyors				2	2	2
Power drills (except for installing rock bolts)			1	31	32	32
Power shovels, draglines, bulldozer sand buckets	1		3	18	21	22
While moving any machine except mining or loading machine			1	6	7	7
Flying particles set in motion by machinery (except rock bolting equipment)				4	4	4
All other machinery, n.e.c			4	9	13	13
Suffocation (no flame or smoldering):						
From foreign gases (gasoline fumes, etc.)				3	3	3
Miscellaneous causes:						
Flying particles from draft or wind				5	5	5
Acetylene or electric welding (burns, flashes, or flying particles)				9	9	9
Irritations and burns from battery fluid or corrosive materials				2	2	2
Burns from controlled fires				5	5	5
All other miscellaneous, n.e.c	1			14	14	15
Total opencut	8	2	37	461	500	508
Grand total	89	5	282	5, 188	5, 475	5, 564

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[1] Permanent—Total Disability.—The loss of, or loss of use of, both hands, or both arms, or both legs, or both feet, or both eyes, or any two thereof; or any injury (except death) which permanently and totally incapacitates the injured person from following any gainful occupation.

[2] Permanent—Partial Disability.—An injury which permanently but only partially disables a worker. Includes the total or partial loss or loss of use of an arm, hand, leg, finger(s), eye, hearing, etc., even though no time was lost.

[3] Temporary—Total Injuries.—Any injury which does not result in death or permanent impairment, but which renders the injured person unable to perform a regularly established job which is open and available to him during the entire time interval corresponding to the hours of his regular shift on any one or more days (including Sundays, days off, or plant shutdown) subsequent to the day of injury.

TABLE 6.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1957*

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal	All injuries
UNDERGROUND MINES						
Underground:						
Fall of rock or ore:						
While mining	4	--------	4	108	112	116
While loading	--------	--------	--------	3	3	3
While testing or taking down back (roof)	2	--------	2	38	40	42
While setting or removing timbers or other supports	--------	2	4	15	21	21
While preparing or installing rock bolts	1	--------	--------	10	10	11
While moving machinery from one working place to another	1	--------	--------	1	1	2
All other falls of rock or ore, n.e.c	2	1	--------	96	97	99
Rock falls due to cars or machines knocking out timbers or other supports:						
By machines	--------	--------	--------	2	2	2
Falls of rock or ore from back, bank, wall, side, ribs or pillar:						
While mining	3	--------	--------	48	48	51
While loading	--------	--------	--------	2	2	2
While testing or taking down back	--------	--------	2	25	27	27
While setting or removing timbers or other supports	2	--------	1	23	24	26
While preparing or installing rock bolts	--------	--------	--------	3	3	3
From pressure, bumps, or bursts	--------	--------	--------	2	2	2
All other falls of rock or ore from back, etc., n.e.c	3	--------	3	86	89	92
Rushes, rolls, or slides of rock or ore	4	--------	4	134	138	142
Falling material or objects other than rock or ore:						
Timbers or other supports	--------	--------	1	25	26	26
Materials or objects dropped or thrown by coworkers	--------	--------	--------	12	12	12
Rolling, shifting or sliding material or objects	2	--------	8	75	83	85
All other falling materials or objects, n.e.c	3	--------	7	206	213	216
Slips or falls of persons:						
On same level:						
While escaping from another hazard	--------	--------	--------	10	10	10
While handling materials or objects	--------	--------	2	77	79	79
From handtools slipping or breaking	--------	--------	--------	5	5	5
While operating or moving machinery	--------	--------	2	23	25	25
All other on same level, n.e.c	--------	--------	4	114	118	118
From an elevation:						
While escaping another hazard	--------	--------	--------	3	3	3
While handling materials	--------	--------	2	13	15	15
While operating or moving machinery	--------	--------	2	9	11	11
Falls of persons down chute, winze, raise, or manway	1	--------	--------	8	8	9
Due to failure of scaffold, ladder, etc	2	--------	--------	30	30	32
All other from an elevation, n.e.c	5	1	6	86	93	98
Handling materials:						
Supports, stulls, ties, or timbers	--------	--------	8	219	227	227
Ore	--------	--------	--------	8	8	8
Rock	--------	--------	4	111	115	115
Rails	--------	--------	1	25	26	26
Wire or wire rope	1	--------	4	23	27	28
Rock-bolting equipment	--------	--------	1	1	2	2
Flying particles while loading car of rock or ore	--------	--------	--------	3	3	3
Flying particles while handling all other materials	--------	--------	--------	57	57	57
All other handling materials, n.e.c	1	--------	11	267	278	279

See footnote at end of table.

TABLE 6.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1957*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Underground—Continued						
Handtools:						
Picks			1	24	25	25
Axes or hatchets			1	27	28	28
Hammers or sledges			1	20	21	21
Crowbars or bars			2	75	77	77
Shovels				11	11	11
Hand wrenches or other tools used to install rock bolts			1	5	6	6
All tools in hand of fellow workers			2	10	12	12
Flying particles from handtools or objects worked on				47	47	47
All other handtools, n.e.c			1	30	31	31
Stepping or kneeling on sharp objects:						
Stepping on nails or other sharp objects				45	45	45
Stepping on loose object			2	48	50	50
Knee or hand injuries while working on all fours				2	2	2
Striking or bumping against objects	1		1	62	63	64
Haulage:						
Mine-gage haulage:						
Struck, run over, or squeezed between cars or motors:						
Coupling or uncoupling			5	19	24	24
Switching, spragging, blocking or braking				7	7	7
Pulling pushing or dropping				8	8	8
Operating or riding			1	10	11	11
All other struck, run over, etc., n.e.c	1		4	27	31	32
Squeezed between car or motor and back, side or timber:						
Coupling or uncoupling			3	3	6	6
Switching, spragging, blocking or braking			2	1	3	3
Pulling, pushing, or dropping	2		1	6	7	9
Operating or riding			2	17	19	19
All other squeezed between car, etc., n.e.c			3	41	44	44
Derailments	1		1	12	13	14
Rerailing cars or motors			2	31	33	33
Collisions (cars or motors under control)				5	5	5
Runaways (cars or motors not under control)				1	1	1
Falling, slipping or jumping in or from cars or motors				13	13	13
Shuttle cars or mobile electric trucks:						
Struck or run over			1	9	10	10
Squeezed between shuttle cars or mobile electric trucks and back, side, machine, etc			1	19	20	20
All other shuttle cars, etc., n.e.c				9	9	9
Miscellaneous haulage:						
Coupling or uncoupling (cars not moving)			4	2	6	6
Ropes or cables on haulage	1			9	9	10
Slips or strains from pulling, pushing, or dropping cars by hand			1	41	42	42
Riding or getting in or off conveyor belts				2	2	2
Flying particles on haulage				13	13	13
All other miscellaneous haulage, n.e.c			6	96	102	102
Standard-gage haulage (railway)				6	6	6
Gasoline or deisel trucks, tractors, etc				1	1	1
Slips or falls from or while getting on or off trucks, tractors, etc				10	10	10

See footnote at end of table.

TABLE 6.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1957*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Underground—Continued						
Explosives:						
Premature shots or blasts	1	--------	1	--------	1	2
Misfire or digging into unexploded holes	1	1	2	3	6	7
Flying fragments	2	--------	2	14	16	18
Suffocation from explosives smoke	--------	--------	--------	4	4	4
Caps or detonators	--------	--------	--------	1	1	1
Transportation	--------	--------	--------	1	1	1
Insufficient warning or improper blasting lines	--------	--------	--------	2	2	2
All other explosives, n.e.c	--------	--------	--------	6	6	6
Electricity (caused by current, including sparks or flashes):						
Trolley wire or pole	--------	--------	--------	2	2	2
Other permanent or semipermanent lighting circuits	--------	--------	--------	3	3	3
Mine motors or shuttle cars	--------	--------	--------	2	2	2
Mining or loading machine	1	--------	--------	--------	--------	1
Cutout switches or junction boxes	--------	--------	--------	2	2	2
Cable for mobile mining, loading, or haulage equipment	--------	--------	--------	3	3	3
All other electricity, etc., n.e.c	--------	--------	1	1	2	2
Machinery:						
While moving mining machines	--------	--------	--------	7	7	7
While setting up mining machines	--------	--------	--------	2	2	2
While operating mining machines	--------	--------	--------	1	1	1
Belt conveyors	1	--------	--------	1	1	2
Chain, bucket, or shaker conveyors	--------	--------	1	4	5	5
Loading machines (including self-loading heads)	2	--------	1	49	50	52
While moving loading machines and self-loading heads	--------	--------	--------	2	2	2
Scraper conveyors	--------	--------	1	18	19	19
Power drills (except for installing rock bolts)	--------	--------	12	144	156	156
Power drills (used for installing rock bolts)	--------	--------	--------	6	6	6
Power equipment (except drills) used for installing rock bolts	--------	--------	1	4	5	5
Power shovels, draglines, bulldozers, and buckets	--------	--------	1	7	8	8
While moving any machine, except mining or loading machine	--------	--------	2	45	47	47
Flying particles set in motion by machinery (except rock bolting equipment)	1	--------	3	36	39	40
Flying particles set in motion by rock bolting equipment	--------	--------	--------	2	2	2
All other machinery, n.e.c	--------	--------	5	47	52	52
Suffocation (no flames or smoldering):						
From natural mine gases	--------	--------	--------	2	2	2
From foreign gases (gasoline fumes, etc.)	--------	--------	--------	5	5	5
Mine fires or suffocation from fires:						
Mine fires:						
Initiated by all other causes	--------	--------	--------	1	1	1
Miscellaneous causes:						
Flying particles from draft or wind	--------	--------	--------	7	7	7
Carbide (gas or burns from)	--------	--------	--------	1	1	1
Acetylene or electric welding (burns, flashes, or flying particles)	--------	--------	--------	3	3	3
Irritations and burns from battery fluid or corrosive materials	--------	--------	--------	10	10	10
All other miscellaneous, n.e.c	--------	--------	7	157	164	164
Total underground	52	5	172	3, 435	3, 612	3, 664

See footnote at end of table.

TABLE 6.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1957*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Shaft and slope:						
Fall of rock or ore				5	5	5
Falling material or objects other than rock or ore:						
Falling cages, skips, or buckets				24	24	24
All other falling material other than rock or ore, n.e.c				2	2	2
Falls of persons:						
On same level:						
While handling materials or objects				1	1	1
From an elevation:						
Falls of persons down shaft or slope	1					1
Haulage:						
Mine-gage haulage:						
Struck, runover, or squeezed between cars or motors:						
Switching, spragging, blocking, or braking	1			1	1	2
All other struck, runover, etc., n.e.c				2	2	2
Squeezed between car or motor and back, side, or timber:						
Coupling or uncoupling				3	3	3
Pulling, pushing, or dropping			1	1	2	2
Shuttle cars or mobile electric trucks				3	3	3
Miscellaneous haulage	1			12	12	13
Machinery	1					1
Total shaft and slope	4		1	54	55	59
Total underground, shaft and slope	56	5	173	3, 489	3, 667	3, 723
Surface:						
Rushes, rolls, or slides of rock or ore				5	5	5
Falling material or objects other than rock or ore:						
Timbers or other supports				5	5	5
Rolling, shifting, or sliding materials or objects			1	8	9	9
All other falling materials or objects, n.e.c	1			9	9	10
Slips or falls of persons:						
On same level:						
While handling materials or obejcts			1	11	12	12
All other on same level, n.e.c	1		1	45	46	47
From an elevation:						
While handling materials				3	3	3
Due to failure of scaffolds, ladders, etc			1	6	7	7
All other from an elevation, n.e.c				16	16	16
Handling materials:						
Supports, stulls, ties, or timbers			2	23	25	25
Rock			1	8	9	9
Rails			1	2	3	3
Wire or wire rope				2	2	2
Flying particles while handling all other materials				8	8	8
All other handling materials, n.e.c	1		1	127	128	129
Handtools:						
Hammers or sledges				6	6	6
Crowbars or bars				2	2	2
Saws			1	4	5	5
Flying particles from handtools or objects worked on				3	3	3
All other handtools, n.e.c				22	22	22

See footnote at end of table.

TABLE 6.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1957*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal	All injuries
UNDERGROUND MINES—Continued						
Surface—Continued						
Stepping or kneeling on sharp or loose objects:						
Stepping on nails or other sharp object				1	1	1
Stepping on loose objects				5	5	5
Knee or hand injuries while working on all fours				2	2	2
Striking or bumping against objects			1	7	8	8
Haulage:						
Mine-gage haulage:						
Struck, run over, or squeezed between cars or motors:						
Coupling or uncoupling			1		1	1
Switching, spragging, blocking, or braking				1	1	1
Pulling, punching, or dropping				1	1	1
All other struck, run over, etc., n.e.c.				2	2	2
All other squeezed between cars, etc., n.e.c.				3	3	3
Miscellaneous haulage:						
Ropes or cables on haulage				1	1	1
Slips or strains from pulling, pushing, or dropping cars by hand				1	1	1
All other miscellaneous haulage, n.e.c.				14	14	14
Standard-gage haulage (railway)				4	4	4
Gasoline or diesel trucks, tractors, etc.				10	10	10
Slips or falls from or while getting on or off trucks, tractors, etc.				3	3	3
Explosives:						
Flying fragments				1	1	1
Caps or detonators				2	2	2
Electricity (caused by current, including sparks or flashes):						
Mining or loading machines				1	1	1
All other electricity, etc., n.e.c.				2	2	2
Machinery:						
Loading machines (including self loading heads)	1			3	3	4
Power drills (except for installing rock bolts)			1	3	4	4
Power shovels, draglines, bulldozers, and buckets				1	1	1
Stationary surface machinery				2	2	2
While moving any machine, except mining or loading machine			1	4	5	5
Flying particles set in motion by machinery (except rock bolting equipment)				3	3	3
All other machinery, n.e.c.			7	23	30	30
Mine fires or suffocation from fires:						
Other fires:						
Burning or exploding oil, gasoline, etc.				1	1	1
Miscellaneous causes:						
Acetylene or electric welding (burns, flashes or flying particles)				3	3	3
Irritations and burns from battery fluid or corrosive material				3	3	3
Burns from controlled fires				2	2	2
All other miscellaneous, n.e.c.	1		1	70	71	72
Total surface	5		22	494	516	521
Total underground, shaft and slope, and surface	61	5	195	3, 983	4, 183	4, 244

See footnote at end of table.

TABLE 6.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1957*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal	All injuries
OPENCUT MINES						
Fall of rock or ore from bank, wall, or side:						
While mining	1		1	4	5	6
Rushes, rolls, or slides of rock or ore				4	4	4
Falling material or objects other than rock or ore:						
Timbers or other supports				2	2	2
Rolling, shifting, or sliding material or objects				3	3	3
All other falling materials or objects, n.e.c			2	19	21	21
Slips or falls of persons:						
On same level:						
While escaping from another hazard			1	2	3	3
While handling materials or objects				1	1	1
While operating or moving machinery				2	2	2
All other on same level, n.e.c			1	23	24	24
From an elevation:						
While escaping another hazard				1	1	1
While handling material				1	1	1
While operating or moving machinery			1	3	4	4
Due to failure of scaffold, ladders, etc				1	1	1
All other from an elevation, n.e.c			2	10	12	12
Handling materials:						
Supports, stulls, ties, or timber				5	5	5
Rock				7	7	7
Rails				3	3	3
Wire or wire ropes				2	2	2
Flying particles while handling all other materials				3	3	3
All other handling material, n.e.c			3	40	43	43
Handtools:						
Picks				2	2	2
Hammer or sledges				3	3	3
Crowbars or bars			1	3	4	4
Hand wrenches or other tools used to install rock bolts				2	2	2
All tools in hand of fellow workers			1	1	2	2
Flying particles from handtools or objects worked on			2	5	7	7
All other handtools, n.e.c				12	12	12
Stepping or kneeling on sharp objects:						
Stepping on nail or other sharp object				1	1	1
Stepping on loose objects				10	10	10
Striking or bumping against objects				2	2	2
Haulage:						
Mine-gage haulage:						
Struck, run over, or squeezed between cars or motors:						
All other struck, run over, etc., n.e.c	1			1	1	2
Squeezed between car or motor and back, side or timber:						
All other squeezed between car, etc., n.e.c				1	1	1
Rerailing cars or motors	1			1	1	2
Collisions (cars or motors under control)	1			1	1	2
Runaways (cars or motors not under control)	1		1	1	2	3
Falling, slipping, or jumping in or from cars or motors				3	3	3
Miscellaneous haulage:						
Riding or getting in or off conveyor belts				1	1	1
Flying particles on haulage				1	1	1
All other miscellaneous haulage, n.e.c				9	9	9
Standard-gage haulage (railways)	1		2	3	5	6
Gasoline or diesel trucks, tractors, etc			4	25	29	29

See footnote at end of table.

TABLE 6.—*Number of injuries at metal mines in the United States and Alaska, by work location, cause, and degree of injury, 1957*—Continued

Injury agency and general location	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal	All injuries
OPENCUT MINES—Continued						
Haulage—Continued						
Slips or falls from or while getting on or off trucks, tractors, etc				11	11	11
Explosives:						
Flying fragments				1	1	1
All other explosives, n.e.c	1			1	1	2
Electricity (caused by current, including sparks or flashes):						
Other permanent or semipermanent lighting circuits				1	1	1
Cutout switches or junction boxes				2	2	2
All other electricity, etc., n.e.c				4	4	4
Machinery:						
While setting up mining machines				1	1	1
Belt conveyers				1	1	1
Loading machines (including self-loading heads)				4	4	4
Power drills (except for installing roof-bolts)			1	17	18	18
Power shovels, draglines, bulldozers, and buckets	1		1	2	3	4
While moving any machine except mining or loading machine			1	1	2	2
Flying particles set in motion by machinery (except rock bolting equipment)				8	8	8
All other machinery, n.e.c	1		7	10	17	18
Mine fires or suffocation from fires:						
Other fires:						
Burning or exploding oil, gasoline, etc				2	2	2
Miscellaneous causes:						
Flying particles from draft or wind				2	2	2
Acetylene or electric welding (burns, flashes or flying particles)				2	2	2
Burns from controlled fires				2	2	2
All other miscellaneous, n.e.c	1			43	43	44
Total open cut mine	10		32	339	371	381
Grand total	71	5	227	4, 322	4, 554	4, 625

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[1] See definitions at end of table 5, page 14.

INJURY EXPERIENCE AT DIFFERENT KINDS OF MINES

(Tables 7-10)

COPPER MINES

The number of men employed and man-hours of work in the copper mining industry declined in 1957; however, the safety record showed improvement over the preceding year. Comparing 1956 with 1957, the number of fatal and nonfatal injuries decreased 32 and 13 percent, respectively. The combined (fatal and nonfatal) injury-frequency rate of 31.24 was 4 percent lower than the rate of 32.43 in 1956. An increase of 50 operations was reported to the Bureau of Mines. The average number of days and man-hours worked by each employee decreased slightly during 1957. The daily workshift averaged 8 hours in 1956 and 1957.

IRON MINES

Fatalities and disabling injuries in the 336 active iron operations that reported to the Bureau of Mines decreased 32 and 15 percent, respectively, in 1957. There were 13 fatalities for the year, compared with 19 reported in 1956. The number of nonfatal injuries in 1956 was 723, compared with 617 in 1957. The combined (fatal and nonfatal) injury-frequency rate of 12.12 in 1957 indicated a decrease of 18 percent from the rate of 14.73 for the preceding year. There was a decline in the number of men employed in 1957; however, man-hours of worktime increased 3 percent. Each employee worked an average of 2,024 hours during 1957—an increase of 8 percent over 1956. An 8-hour daily shift was maintained both in 1956 and 1957.

LEAD-ZINC MINES

The safety record at lead-zinc mines showed some improvement in 1957. Although there was a 7-percent increase in the number of men employed, both fatal and nonfatal injuries decreased considerably. Fatal injuries totaled 14—9 less than reported in 1956. Nonfatal injuries numbered 1,320 in 1957, compared with 1,548 reported in 1956—a decrease of 39 and 15 percent, respectively. The combined (fatal and nonfatal) injury-frequency rate of 57.57 in 1957 represented a 13-percent reduction from the preceding year. During 1957 employees worked an average of 1,967 hours—184 hours less than in 1956. An 8-hour daily shift was worked in both 1956 and 1957.

GOLD-SILVER LODE MINES

Reports from 236 gold-silver lode mines revealed a more favorable safety record in 1957 than in 1956. The average number of men employed increased 30 percent, and man-hours increased 33 percent in 1957 over 1956. There were 6 fatalities reported (a gain of 2), but nonfatal injuries decreased by 146, resulting in a combined (fatal and nonfatal) injury-frequency rate of 45.76—48 percent lower than in 1956. Days active increased to 267 in 1957—a gain of 8 over the preceding year. Each employee averaged a total of 2,133 hours (a 3-percent increase) and worked 8 hours daily in both 1956 and 1957.

GOLD PLACER MINES

The safety record at gold placer mines was less favorable in 1957 than in 1956, due to an increase in both fatal and nonfatal injuries. No fatalities were reported in 1956. Nonfatal injuries increased to 140 in 1957 from 138 in 1956. The average number of men employed showed only a very slight increase (12); however, a 12-percent decrease in man-hours was noted in 1957. Dredging operations were responsible for the 2 fatal injuries and 86 percent of the nonfatal injuries at placer mines in 1957. Each worker accumulated an average of 1,534 hours of worktime in 1957 and worked an 8.3-hour shift daily.

MISCELLANEOUS METAL MINES

Included in this group are mines that produce antimony, bauxite, chromite, cobalt, manganese, mercury, molybdenum, pyrite, titanium, tungsten, uranium-vanadium, magnesium, and minor metals. Employment and general injury experience at miscellaneous metal mines improved somewhat over that recorded in 1956. The average number of men working at these mines in 1957 rose 4 percent; total injuries (fatal and nonfatal) decreased 22 percent. The overall injury-frequency rate likewise declined 21 percent—from 70.88 reported in 1956 to 55.88 in 1957.

Conversely, 2 more fatalities occurred at these mines in 1957, for an accumulated total of 17, compared with 15 reported in the preceding year; the total number of nonfatal injuries dropped considerably—874 reported in 1957, compared with 1,130 in 1956. The combination of a substantial decline in the number of injuries and a slight increase in employment is primarily responsible for the 21-percent reduction in the combined (fatal and nonfatal) injury-frequency rate in 1957 from that in 1956.

TABLE 7.—*Employment data and injury experience at all metal mines in the United States and Alaska, by mineral and work location, 1956*

Kind of mine	Active mines	Men employed						Average days active						Injuries									
														Fatal					Nonfatal				
		Underground	Surface [1]	Open cut [2]	Total	Officeworkers	Grand total	Underground	Surface [1]	Opencut [2]	Total	Officeworkers	Grand total	Underground	Surface [2]	Opencut [1]	Total excluding officeworkers	Total including officeworkers	Underground	Surface [1]	Opencut [2]	Total excluding officeworkers	Total including officeworkers
Copper	131	8,509	2,313	7,325	18,147	1,318	19,465	301	301	341	317	298	316	24	2	2	28	28	1,136	107	220	1,463	1,463
Iron	249	11,297	4,706	10,814	26,817	953	27,770	218	233	251	234	259	235	15	1	3	19	19	512	47	164	723	723
Lead-zinc	222	9,338	1,679	24	11,041	1,076	12,117	272	256	100	269	268	269	22	1	------	23	23	1,438	110	------	1,548	1,548
Gold-silver lode	153	2,060	521	50	2,631	34	2,665	261	265	103	259	242	259	3	1	------	4	4	411	58	4	473	473
Placer	184	11	1,449	79	1,539	36	1,575	126	211	134	206	288	208	------	------	------	------	------	------	135	3	138	138
Miscellaneous metals [3]	815	5,285	939	1,874	8,098	898	8,996	261	250	214	249	286	252	10	2	3	15	15	873	148	109	1,130	1,130
Total, metal mines	1,754	36,500	11,607	20,166	68,273	4,315	72,588	260	250	280	264	279	265	74	7	8	89	89	4,370	605	500	5,475	5,475

Kind of mine	Man-days worked						Man-hours worked					
	Underground	Surface [1]	Opencut [2]	Total	Officeworkers	Grand total	Underground	Surface [1]	Opencut [2]	Total	Officeworkers	Grand total
Copper	2,558,871	696,347	2,500,363	5,755,581	393,155	6,148,736	20,468,044	5,566,285	19,946,662	45,980,991	3,145,247	49,126,238
Iron	2,465,949	1,097,551	2,717,953	6,281,453	246,504	6,527,957	19,730,495	8,782,297	21,863,486	50,376,278	1,977,576	52,353,854
Lead-zinc	2,535,591	429,002	2,389	2,966,982	288,651	3,255,633	20,296,031	3,430,113	18,982	23,745,126	2,307,619	26,052,745
Gold-silver lode	538,279	138,282	5,157	681,718	8,211	689,929	4,307,333	1,104,294	42,034	5,453,661	64,120	5,517,781
Placer	1,381	305,453	10,582	317,416	10,358	327,774	11,048	2,589,233	97,224	2,697,505	86,709	2,784,214
Miscellaneous metals [3]	1,379,300	234,422	400,410	2,014,132	257,093	2,271,225	11,044,166	1,878,560	3,230,621	16,153,347	2,058,414	18,211,761
Total, metal mines	9,479,371	2,901,057	5,636,854	18,017,282	1,203,972	19,221,254	75,857,117	23,350,782	45,199,009	144,406,908	9,639,685	154,046,593

Kind of mine	Injury-frequency rates									
	Fatal					Nonfatal				
	Underground	Surface [1]	Opencut	Total excluding officeworkers	Total including officeworkers	Underground	Surface [1]	Opencut [2]	Total excluding officeworkers	Total including officeworkers
Copper	1.17	.36	.10	.61	.57	55.50	19.22	11.03	31.82	29.78
Iron	.76	.11	.14	.38	.36	25.95	5.35	7.50	14.35	13.81
Lead-zinc	1.08	.29	------	.97	.88	70.85	32.07	------	65.19	59.42
Gold-silver lode	.70	.91	------	.73	.72	95.42	52.52	95.16	86.73	85.72
Placer	------	------	------	------	------	------	52.14	30.86	51.16	49.57
Miscellaneous metals [3]	.91	1.06	.93	.93	.82	79.05	78.78	33.74	69.95	62.05
Total, metal mines	.98	.30	.18	.62	.58	57.61	25.91	11.06	37.91	35.54

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[1] Includes placer dredging and other methods operations.
[2] Includes placer hydraulicking operations.
[3] Includes antimony, bauxite, chromite, manganese, mercury, molybdenum, pyrite, titanium, tungsten, uranium-vanadium and minor metals.

TABLE 8.—*Employment data and injury experience at all metal mines in the United States and Alaska, by mineral and work location, 1957*

Kind of mine	Men employed							Average days active						Injuries									
														Fatal					Nonfatal				
	Active mines	Underground	Surface [1]	Opencut [2]	Total	Officeworkers	Grand total	Underground	Surface [1]	Opencut [2]	Total	Officeworkers	Grand total	Underground	Surface [1]	Opencut [2]	Total excluding officeworkers	Total including officeworkers	Underground	Surface [1]	Opencut [2]	Total excluding officeworkers	Total including officeworkers
Copper	181	7,956	2,647	7,061	17,664	582	18,246	276	279	319	294	289	294	16	-------	3	19	19	1,005	99	172	1,276	1,276
Iron	336	10,537	4,291	10,841	25,669	1,202	26,871	240	257	262	252	253	252	7	-------	6	13	13	462	53	102	617	617
Lead-zinc	308	9,802	1,925	50	11,777	769	12,546	247	243	164	246	245	246	13	1	-------	14	14	1,236	79	5	1,320	1,322
Gold-silver lode	236	2,271	1,079	61	3,411	88	3,499	260	291	101	267	249	266	6	-------	-------	6	6	289	37	1	327	327
Placer	211	11	1,474	66	1,551	55	1,606	103	189	129	186	217	189	-------	2	-------	2	2	-------	140	-------	140	140
Miscellaneous metals [3]	757	5,525	1,170	1,690	8,385	980	9,365	246	249	200	237	277	241	14	2	1	17	17	675	108	91	874	874
Total, metal mines	2,029	36,102	12,586	19,769	68,457	3,676	72,133	252	254	276	259	264	260	56	5	10	71	71	3,667	516	371	4,554	4,556

Kind of mine	Man-days worked						Man-hours worked					
	Underground	Surface [1]	Opencut [2]	Total	Officeworkers	Grand total	Underground	Surface [1]	Opencut [2]	Total	Officeworkers	Grand total
Copper	2,197,314	737,949	2,252,249	5,187,512	168,267	5,355,779	17,577,101	5,894,980	17,980,240	41,452,321	1,344,137	42,796,458
Iron	2,533,418	1,103,468	2,843,084	6,479,970	304,542	6,784,512	20,267,348	8,828,024	22,862,629	51,958,001	2,441,606	54,399,607
Lead-zinc	2,422,109	467,043	8,194	2,897,346	188,725	3,086,071	19,361,231	3,740,206	66,990	23,168,427	1,508,314	24,676,741
Gold-silver lode	589,702	314,371	6,171	910,244	21,879	932,123	4,710,957	2,514,863	50,475	7,276,295	173,478	7,449,773
Placer	1,134	278,143	8,542	287,819	15,254	303,073	8,508	2,301,735	69,539	2,379,782	121,855	2,501,617
Miscellaneous metals [3]	1,359,342	291,121	337,355	1,987,818	271,181	2,258,999	10,871,342	2,337,999	2,736,358	15,945,699	2,167,897	18,113,596
Total, metal mines	9,103,019	3,192,095	5,455,595	17,750,709	969,848	18,720,557	72,796,487	25,617,807	43,766,231	142,180,525	7,757,267	149,937,792

Kind of mine	Injury-frequency rates									
	Fatal					Nonfatal				
	Underground	Surface [1]	Opencut [2]	Total excluding officeworkers	Total including officeworkers	Underground	Surface [1]	Opencut [2]	Total excluding officeworkers	Total including officeworkers
Copper	0.91	-------	0.17	0.46	0.44	57.18	16.79	9.57	30.78	29.82
Iron	.35	-------	.26	.25	.24	22.80	6.00	4.46	11.87	11.34
Lead-zinc	.67	.27	-------	.60	.57	63.84	21.12	74.64	56.97	53.57
Gold-silver lode	1.27	-------	-------	.82	.81	61.35	14.71	19.81	44.94	43.89
Placer	-------	.87	-------	.84	.80	-------	60.82	-------	58.83	55.96
Miscellaneous metals [3]	1.29	.86	.37	1.07	.94	62.09	46.19	33.26	54.81	48.25
Total, metal mines	.77	.20	.23	.50	.47	50.37	20.14	8.48	32.03	30.39

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[1] Includes placer dredging and other methods operations.

[2] Includes placer hydraulicking operations.

[3] Includes antimony, bauxite, chromite, cobalt, columbium-tantalum, mangnesium compounds, manganese, mercury, molybdenum, titanium, tungsten, uranium-vanadium, zirconium, and minor metals.

TABLE 9.—*Injuries in metal mines, by work location, cause, severity, and kind of mineral, 1956*

Kind of mineral and severity of injury	Underground															Shaft and slope										Total underground, shaft and slope
	Falls of rock or ore	Rushes, rolls, or slides	Falling materials or objects	Falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosives	Electricity	Machinery	Suffocation	Miscellaneous causes	Total underground	Falls of rock or ore	Falling materials or objects	Falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Haulage	Machinery	Miscellaneous causes	Total shaft and slope	
Fatal:																										
Copper	9	1	1	2					6	2			1	2	24											24
Iron	8	1		1	1				2		1				14			1							1	15
Lead-zinc	9	1	1	4	1				3	1	1		1		22											22
Gold lode	1								1	1					3											3
Placer																										
Miscellaneous	6	1							1		1		1		10											10
Total	33	4	2	7	2				13	4	3		3	2	73			1							1	74
Permanent total:																										
Copper	1									1					2											2
Iron																										
Lead-zinc																										
Gold lode																										
Placer																										
Miscellaneous										1					1											1
Total	1									2					3											3
Permanent partial:																										
Copper	8	2	3	8	9	1			7	1		9			48											48
Iron	3		3	1	2	1			9	2		4			25											25
Lead-zinc	22	1	4	7	5	3	1	1	8	2		19			73		1					3			4	77
Gold lode	5		1	2	3				5			5			21	1			1				1		3	24
Placer																										
Miscellaneous	10		3	6	7	4	1		11			1		2	45											45
Total	48	3	14	24	26	9	2	1	40	5		38		2	212	1	1		1			3	1		7	219
Temporary:																										
Copper	155	58	78	139	219	78	33	2	144	16	5	104		43	1,074				1	1		10			12	1,086
Iron	34	61	28	77	92	30	21	4	66	7	2	55	2	7	486		1								1	487
Lead-zinc	185	31	62	174	295	101	53	9	147	11	3	204	5	40	1,320	1	1		5			32	2		41	1,361
Gold lode	50	6	27	29	70	32	13	3	37	1		47		27	342	13	2	2	5	1	1	9	8	4	45	387
Placer																										
Miscellaneous	125	31	27	81	144	62	27	5	136	10		129	5	35	817	1		1	1			7			10	827
Total	549	187	222	500	820	303	147	23	530	45	10	539	12	152	4,039	15	4	3	12	2	1	58	10	4	109	4,148

TABLE 9.—*Injuries in metal mines, by work location, cause, severity, and kind of mineral, 1956*—Continued

Kind of mineral and severity of injury	Surface[1]															Total underground, shaft and slope and surface	Opencut[2]														Grand Total
	Rushes, rolls, or slides	Falling material or objects	Falls of persons	Handling materials	Hand tools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosives	Electricity	Machinery	Suffocation	Mine fires	Miscellaneous	Total surface		Falls of bank, wall or side	Rushes, rolls, or slides	Falling material or objects	Falls of persons	Handling materials	Hand tools	Stepping or kneeling on sharp or loose objects	Haulage	Explosives	Electricity	Machinery	Suffocation	Miscellaneous causes	Total opencut	
Fatal:																															
Copper								1						1	2	26	2													2	28
Iron										1					1	16	1							1					1	3	19
Lead-zinc								1							1	23															23
Gold lode								1							1	4															4
Placer																															
Miscellaneous			2												2	12								2			1			3	15
Total			2					3		1				1	7	81	3							3			1		1	8	89
Permanent total:																															
Copper																2								1						1	3
Iron																															
Lead-zinc																															
Gold lode																															
Placer																															
Miscellaneous																1									1					1	2
Total																3								1	1					2	5
Permanent partial:																															
Copper				2				1			2				5	53	1		2	1	4	1		2			3			14	67
Iron			1	2	2			1			2				8	33	1		1		5	1		5	1		5			19	52
Lead-zinc			1	2											3	80															80
Gold lode											1				1	25															25
Placer				1	2						2				5	5															5
Miscellaneous				1							3				4	49								2			2			4	53
Total			2	8	4			2			10				26	245	2		3	1	9	2		9	1		10			37	282
Temporary:																															
Copper	3	4	10	45	8	3	2	8			9	1		9	102	1,188	5		4	29	47	11	6	57		2	32		12	205	1,393
Iron		1	6	15	2	1		6			4		1	3	39	526	1	1	9	27	25	5	14	28		1	18		16	145	671
Lead-zinc		5	14	29	7	2		21	1	2	19			7	107	1,468															1,468
Gold lode		1	14	12	6	1	2	8			6			7	57	444				2					1		1			4	448
Placer			29	34	15	1			1	2	9			39	130	130					1	2								3	133
Miscellaneous	4	5	31	40	4	4		19	1		11	1		24	144	971	3	3	2	5	32	6	7	11	4	1	20	3	7	104	1,075
Total	7	16	104	175	42	12	4	62	3	4	58	2	1	89	579	4,727	9	4	15	63	105	24	27	96	5	4	71	3	35	461	5,188

[1] Includes placer dredging and other methods operations.
[2] Includes placer hydraulicking operations.

TABLE 10.—*Injuries in metal mines, by work location, cause, severity, and kind of mineral, 1957*

Kind of mineral and severity of injury	Underground																Shaft and slope						Total underground, shaft and slope
	Falls of rock or ore	Rushes, rolls or slides	Falling materials or objects	Falls of persons	Handling materials	Hand tools	Stepping or kneeling on sharp or loose object	Striking or bumping against objects	Haulage	Explosives	Electricity	Machinery	Suffocation	Mine fires	Miscellaneous causes	Total underground	Falls of rock or ore	Falling material or objects	Falls of persons	Haulage	Machinery	Total shaft and slope	
Fatal:																							
Copper	4			4				1	2	1	1	2				15					1	1	16
Iron	2	2		1						2						7							7
Lead-zinc	6		1	1	2				3							13							13
Gold lode	3			2												5			1			1	6
Placer																							
Miscellaneous	3	2	4							1		2				12				2		2	14
Total	18	4	5	8	2			1	5	4	1	4				52			1	2	1	4	56
Permanent total:																							
Copper																							
Iron																							
Lead-zinc	3			1						1						5							5
Gold lode																							
Placer																							
Miscellaneous																							
Total	3			1						1						5							5
Permanent partial:																							
Copper	4	3	7	7	4	4	2		5	2		9				47				1		1	48
Iron	2		4		2				2			5			2	17							17
Lead-zinc	7	1	3	7	16	4			16	2	1	12			2	71							71
Gold lode				1	3				5			1				10							10
Placer																							
Miscellaneous	3		2	3	4	1		1	9	1					3	27							27
Total	16	4	16	18	29	9	2	1	37	5	1	27			7	172				1		1	173
Temporary:																							
Copper	143	39	116	96	183	82	30	16	89	18	2	77			46	937	4			16		20	957
Iron	62	49	58	64	74	9	9	19	39	2	5	30			25	445							445
Lead-zinc	156	19	80	136	273	91	30	17	150	6	5	132	5		54	1,154	1	1		4		6	1,160
Gold lode	39	14	29	19	53	20	7	6	38	2		36	1		13	277		1	1			2	279
Placer																							
Miscellaneous	62	13	59	63	131	47	19	4	102	3	1	100	1	1	40	646				2		2	648
Total	462	134	342	378	714	249	95	62	418	31	13	375	7	1	178	3,459	5	2	1	22		30	3,489

TABLE 10.—*Injuries in metal mines, by work location, cause, severity, and kind of mineral, 1957*—Continued

Kind of mineral and severity of injury	Surface[1]															Opencut[2]														
	Rushes, rolls, or slides	Falling materials or objects	Falls of persons	Handling materials	Handtools	Kneeling or stepping on sharp or loose objects	Striking or bumping against objects	Haulage	Explosives	Electricity	Machinery	Mine fires	Miscellaneous causes	Total surface	Total underground, shaft, slope, and surface	Falls of bank, wall or side	Rushes, rolls, or slides	Falling materials or objects	Falls of persons	Handling material	Handtools	Kneeling or stepping on sharp or loose objects	Striking or bumping against objects	Haulage	Explosives	Electricity	Machinery	Mine fires	Miscellaneous causes	Total opencut	Grand total
Fatal:																															
Copper	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	16	1	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	1	-----	-----	3	19
Iron	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	7	-----	-----	-----	-----	-----	-----	-----	-----	4	-----	-----	1	-----	1	6	13
Lead-zinc	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	14
Gold lode	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
Placer	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	1	2	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2
Miscellaneous	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	2	16	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	1	17
Total	-----	1	1	1	-----	-----	-----	-----	-----	-----	1	-----	1	5	61	1	-----	-----	-----	-----	-----	-----	-----	5	1	-----	2	-----	1	10	71
Permanent total:																															
Copper	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Iron	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Lead-zinc	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5
Gold lode	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Placer	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Miscellaneous	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5
Permanent partial:																															
Copper	-----	-----	-----	2	-----	-----	1	-----	-----	-----	4	-----	-----	7	55	1	-----	-----	1	-----	3	-----	-----	5	-----	-----	5	-----	-----	15	70
Iron	-----	1	-----	1	-----	-----	-----	-----	-----	-----	1	-----	-----	3	20	-----	-----	2	2	2	1	-----	-----	1	-----	-----	3	-----	-----	11	31
Lead-zinc	-----	-----	2	-----	1	-----	-----	-----	-----	-----	1	-----	1	5	76	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	76
Gold lode	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	1	11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	11
Placer	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	2	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2
Miscellaneous	-----	-----	1	2	-----	-----	-----	1	-----	-----	-----	-----	-----	4	31	-----	-----	-----	2	1	-----	-----	-----	1	-----	-----	2	-----	-----	6	37
Total	-----	1	3	5	1	-----	1	1	-----	-----	9	-----	1	22	195	1	-----	2	5	3	4	-----	-----	7	-----	-----	10	-----	-----	32	227
Temporary:																															
Copper	-----	10	20	36	3	4	-----	5	1	2	3	-----	8	92	1,049	1	-----	16	18	25	11	4	1	28	2	4	17	2	28	157	1,206
Iron	1	3	7	13	4	1	3	4	-----	-----	1	-----	13	50	495	-----	3	6	16	18	9	5	1	18	-----	1	3	-----	11	91	586
Lead-zinc	1	4	16	19	5	1	1	9	1	-----	11	-----	6	74	1,234	-----	-----	-----	2	-----	-----	1	-----	-----	-----	-----	2	-----	-----	5	1,239
Gold lode	-----	1	6	11	4	-----	1	3	-----	-----	5	-----	5	36	315	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	316
Placer	-----	-----	21	57	15	-----	-----	-----	-----	1	13	-----	31	138	138	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	138
Miscellaneous	3	4	11	34	6	2	2	19	1	-----	6	1	15	104	752	3	1	2	8	16	8	1	-----	12	-----	2	22	-----	10	85	837
Total	5	22	81	170	37	8	7	40	3	3	39	1	78	494	3,983	4	4	24	44	60	28	11	2	58	2	7	44	2	49	339	4,322

[1] Includes placer dredging and other methods operations.
[2] Includes placer hydraulicking operations.

INJURY EXPERIENCE AT METALLURGICAL PLANTS

(Tables 11-16)

Metallurgical plants include metal ore-dressing plants and their auxiliaries and nonferrous smelters (reduction and refining plants and auxiliaries). The safety record of metallurgical plants was less favorable in 1957 than in the preceding year. Fatalities increased by 1 in 1957 over 1956. Nonfatal injuries decreased by 263 (10 percent), which resulted in a combined (fatal and nonfatal) injury-frequency rate of 13.74, compared with 14.87 in 1956. There was a slight decline in both the number of men employed and man-hours worked. Employees averaged 5 days less work in 1957 than in 1956. An 8-hour workday was maintained in both 1956 and 1957.

TABLE 11.—*Metallurgical plants: Employment data and injury experience, by industry groups, 1956* [1]

Industry	Men employed			Average active plant days			Man-days worked			Man-hours worked		
	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total
Copper	18, 877	1, 273	20, 150	330	283	327	6, 238, 250	360, 438	6, 598, 688	49, 897, 290	2, 867, 429	52, 764, 719
Iron	5, 114	--------	5, 114	241	--------	241	1, 231, 247	--------	1, 231, 247	9, 937, 172	--------	9, 937, 172
Lead-zinc	16, 354	1, 343	17, 697	314	252	309	5, 131, 218	337, 765	5, 468, 983	40, 964, 338	2, 685, 722	43, 650, 060
Gold-silver lode	367	--------	367	295	--------	295	108, 402	--------	108, 402	865, 748	--------	865, 748
Miscellaneous metals [2]	24, 969	1, 691	26, 660	351	258	345	8, 761, 011	435, 633	9, 196, 644	69, 913, 167	3, 485, 065	73, 398, 232
Total	65, 681	4, 307	69, 988	327	263	323	21, 470, 128	1, 133, 836	22, 603, 964	171, 577, 715	9, 038, 216	180, 615, 931

Industry	Injuries						Injury-frequency rates per million man-hours						Injury-severity rates per million man-hours			
	Fatal			Nonfatal			Fatal			Nonfatal			Excluding officeworkers		Including officeworkers	
	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Fatal	Nonfatal	Fatal	Nonfatal
Copper	5	--------	5	653	1	654	0. 10	--------	0. 09	13. 09	0. 35	12. 39	601. 24	580. 97	568. 56	549. 40
Iron	1	--------	1	92	--------	92	. 10	--------	. 10	9. 26	--------	9. 26	603. 79	664. 58	603. 79	664. 58
Lead-zinc	8	--------	8	890	1	891	. 20	--------	. 18	21. 73	. 37	20. 41	1, 171. 75	1, 027. 87	1, 099. 65	964. 63
Gold-silver lode	--------	--------	--------	24	--------	24	--------	--------	--------	27. 72	--------	27. 72	--------	462. 03	--------	462. 03
Miscellaneous metals [2]	6	--------	6	884	--------	884	. 09	--------	. 08	12. 64	--------	12. 04	514. 92	314. 52	490. 48	299. 58
Total	20	--------	20	2, 543	2	2, 545	. 12	--------	. 11	14. 82	. 22	14. 09	699. 39	583. 34	664. 39	554. 15

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[1] Includes smelters, primary nonferrous reduction and refinery plants, and ore-dressing plants.
[2] Includes aluminum, antimony, bauxite, chromite, cobalt, magnesium, manganese, mercury, pyrite, titanium, tungsten, uranium-vanadium, and minor metals.

TABLE 12.—*Metallurgical plants: Employment data and injury experience, by industry groups, 1957* [1]

Industry	Men employed			Average active plant days			Man-days worked			Man-hours worked		
	Production workers	Officeworkers	Total	Production workers	Officeworkers	Total	Production workers	Officeworkers	Total	Production workers	Officeworkers	Total
Copper	18, 909	1, 032	19, 941	322	263	319	6, 081, 727	271, 881	6, 353, 608	48, 678, 012	2, 149, 502	50, 827, 514
Iron	5, 218	----------	5, 218	262	----------	262	1, 366, 846	----------	1, 366, 846	11, 003, 839	----------	11, 003, 839
Lead-zinc	15, 982	1, 437	17, 419	308	271	305	4, 927, 704	389, 531	5, 317, 235	39, 321, 509	3, 116, 102	42, 437, 611
Gold-silver lode	468	----------	468	267	----------	267	125, 043	----------	125, 043	1, 000, 667	----------	1, 000, 667
Miscellaneous metals [2]	24, 635	1, 817	26, 452	345	288	341	8, 501, 257	523, 426	9, 024, 683	67, 485, 365	4, 039, 711	71, 525, 076
Total	65, 212	4, 286	69, 498	322	276	319	21, 002, 577	1, 184, 838	22, 187, 415	167, 489, 392	9, 305, 315	176, 794, 707

Industry	Injuries						Injury-frequency rate per million man-hours						Injury-severity rates per million man-hours			
	Fatal			Nonfatal			Fatal			Nonfatal			Excluding officeworkers		Including officeworkers	
	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Fatal	Nonfatal	Fatal	Nonfatal
Copper	9	----------	9	654	1	655	0. 18	----------	0. 18	13. 44	0. 47	12. 89	1, 109. 33	647. 36	1, 062. 42	623. 74
Iron	1	----------	1	67	----------	67	. 09	----------	. 09	6. 09	----------	6. 09	545. 26	740. 74	545. 26	740. 74
Lead-zinc	5	----------	5	873	----------	873	. 13	----------	. 12	22. 20	----------	20. 57	762. 94	1, 037. 32	706. 92	961. 15
Gold-silver lode	----------	----------	----------	20	----------	20	----------	----------	----------	19. 99	----------	19. 99	----------	6, 346. 77	----------	6, 346. 77
Miscellaneous metals [2]	6	----------	6	666	2	668	. 09	----------	. 08	9. 87	. 50	9. 34	533. 45	632. 66	503. 32	597. 59
Total	21	----------	21	2, 280	3	2, 283	. 13	----------	. 12	13. 61	. 32	12. 91	788. 11	773. 17	746. 63	733. 83

[1] Includes smelters, primary nonferrous reduction and refinery plants, and ore-dressing plants.

[2] Includes aluminum, antimony, bauxite, chromite, cobalt, columbium-tantalum, magnesium compounds, manganese, mercury, molybdenum, titanium, tungsten, uranium-vanadium, and minor metals.

TABLE 13.—*Smelters: Primary nonferrous reduction and refinery plants, by industry groups, 1956* [1]

Industry	Men employed			Average active smelter days			Man-days worked			Man-hours worked		
	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total
Copper	12, 194	1, 273	13, 467	323	283	319	3, 936, 906	360, 438	4, 297, 344	31, 497, 463	2, 867, 429	34, 364, 892
Lead	3, 758	362	4, 120	314	263	310	1, 181, 157	95, 265	1, 276, 422	9, 449, 245	762, 128	10, 211, 373
Zinc	9, 619	981	10, 600	326	247	318	3, 133, 552	242, 500	3, 376, 052	24, 982, 673	1, 923, 594	26, 906, 267
Miscellaneous metals [2]	20, 849	1, 691	22, 540	362	258	354	7, 550, 053	435, 633	7, 985, 686	60, 208, 786	3, 485, 065	63, 693, 851
Total	46, 420	4, 307	50, 727	340	263	334	15, 801, 668	1, 133, 836	16, 935, 504	126, 138, 167	9, 038, 216	135, 176, 383

Industry	Injuries						Injury-frequency rates per million man-hours						Injury-severity rates per million man-hours			
	Fatal			Nonfatal			Fatal			Nonfatal			Excluding office-workers		Including office-workers	
	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Fatal	Nonfatal	Fatal	Nonfatal
Copper	2	----------	2	469	1	470	0. 06	----------	0. 06	14. 89	0. 35	13. 68	380. 98	752. 03	349. 19	689. 28
Lead	6	----------	6	138	----------	138	. 63	----------	. 59	14. 60	----------	13. 51	3, 809. 83	1, 515. 25	3, 525. 48	1, 402. 16
Zinc	1	----------	1	666	1	667	. 04	----------	. 04	26. 66	. 52	24. 79	240. 17	1, 024. 03	223. 00	950. 82
Miscellanecus metals [2]	2	----------	2	591	----------	591	. 03	----------	. 03	9. 82	----------	9. 28	199. 31	219. 72	188. 40	207. 70
Total	11	----------	11	1, 864	2	1, 866	. 09	----------	. 08	14. 78	. 22	13. 80	523. 24	608. 99	488. 25	568. 27

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[1] Includes smelters, refineries, and roasting, electrolytic, retort, and all other nonferrous-metal reduction or refining plants.
[2] Includes aluminum, antimony, bauxite, cobalt, magnesium, titanium, and minor metals.

TABLE 14.—*Smelters: Primary nonferrous reduction and refinery plants, by industry groups, 1957* [1]

Industry	Men employed			Average active plant days			Man-days worked			Man-hours worked		
	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total
Copper	11, 826	1, 032	12, 858	323	263	318	3, 820, 769	271, 881	4, 092, 650	30, 582, 780	2, 149, 502	32, 732, 282
Lead	3, 439	393	3, 832	314	267	309	1, 078, 679	105, 109	1, 183, 788	8, 629, 463	840, 867	9, 470, 330
Zinc	9, 263	1, 044	10, 307	326	272	321	3, 023, 225	284, 422	3, 307, 647	24, 083, 462	2, 275, 235	26, 358, 697
Miscellaneous metals [2]	19, 118	1, 817	20, 935	359	288	353	6, 865, 927	523, 426	7, 389, 353	54, 398, 215	4, 039, 711	58, 437, 926
Total	43, 646	4, 286	47, 932	339	276	333	14, 788, 600	1, 184, 838	15, 973, 438	117, 693, 920	9, 305, 315	126, 999, 235

Industry	Injuries						Injury-frequency rate per million man-hours						Injury-severity rates per million man-hours			
	Fatal			Nonfatal			Fatal			Nonfatal			Excluding office-workers		Including office-workers	
	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Production workers	Office-workers	Total	Fatal	Nonfatal	Fatal	Nonfatal
Copper	5	--------	5	375	1	376	0. 16	--------	0. 15	12. 26	0. 47	11. 49	980. 94	582. 03	916. 53	549. 64
Lead	1	--------	1	137	--------	137	. 12	--------	. 11	15. 88	--------	14. 47	695. 29	1, 045. 60	633. 56	952. 77
Zinc	4	--------	4	632	--------	632	. 17	--------	. 15	26. 24	--------	23. 98	996. 53	969. 46	910. 52	885. 78
Miscellaneous metals [2]	2	--------	2	393	2	395	. 04	--------	. 03	7. 22	. 50	6. 76	220. 60	517. 65	205. 35	482. 68
Total	12	--------	12	1, 537	3	1, 540	. 10	--------	. 09	13. 06	. 32	12. 13	611. 76	665. 54	566. 93	618. 66

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[1] Includes smelters, refineries, and roasting, electrolytic, retort, and all other nonferrous-metal reduction or refining plants.
[2] Includes aluminum, antimony, bauxite, cobalt, magnesium, titanium, and minor metals.

Table 15.—*Ore-dressing plants: Employment data and injury experience, by industry groups, 1956* [1]

Industry	Men employed	Average active mill-days	Man-days worked	Man-hours worked	Injuries		Injury-frequency rates per million man-hours		Injury-severity rates per million man-hours	
					Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Copper	6,683	344	2,301,344	18,399,827	3	184	0.16	10.00	978.27	288.15
Iron	5,114	241	1,231,247	9,937,172	1	92	.10	9.26	603.79	664.58
Lead-zinc	2,977	274	816,509	6,532,420	1	86	.15	13.17	918.50	337.55
Gold-silver lode	367	295	108,402	865,748	....	24	....	27.72	....	462.03
Miscellaneous metals [2]	4,120	294	1,210,958	9,704,381	4	293	.41	30.19	2,473.11	902.69
Total	19,261	294	5,668,460	45,439,548	9	679	.20	14.94	1,188.39	512.11

[1] Includes crushers, grinders, washers, and ore-concentration, sintering, cyaniding, leaching, and all other metallic ore-dressing plants and auxiliary works.

[2] Includes antimony, bauxite, chromite, manganese, mercury, molybdenum, pyrite, titanium, tungston, uranium-vanadium, and minor metals

Table 16.—*Ore-dressing plants: Employment data and injury experience, by industry groups, 1957* [1]

Industry	Men employed	Average active plant days	Man-days worked	Man-hours worked	Injuries		Injury-frequency rates per million man-hours		Severity rates per million man-hours	
					Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Copper	7,083	319	2,260,958	18,095,232	4	279	0.22	15.42	1,326.32	757.77
Iron	5,218	262	1,366,846	11,003,839	1	67	.09	6.09	545.26	740.74
Lead-zinc	3,280	252	825,800	6,608,584	....	104	....	15.74	....	1,352.33
Gold-silver lode	468	267	125,043	1,000,667	....	20	....	19.99	....	6,346.77
Miscellaneous metals [2]	5,517	296	1,635,330	13,087,150	4	273	.31	20.86	1,833.86	1,110.71
Total	21,566	288	6,213,977	49,795,472	9	743	.18	14.92	1,084.44	1,037.99

[1] Includes crushers, grinders, washers, ore-concentration, sintering, cyaniding, leaching, and all other metallic ore-dressing plants and auxiliary works.

[2] Includes antimony, bauxite, chromite, columbium-tantalum, magnesium compounds, manganese, mercury, molybdenum, titanium, tungsten, uranium-vanadium, and minor metals.

INJURY EXPERIENCE BY STATES AND ALASKA

Tables 17–34

Analysis of the 1957 metal-mine reports received from the operators revealed that of the States employing 1,000 men or more, only 1 (Wisconsin) was fatality free. All States represented in this category in 1956 reported 1 or more fatalities; however, in 1957, 7 States revealed a fatality rate lower than the United States average, compared with 10 States in 1956. Six States revealed a nonfatal-injury rate lower than the United States average for 1957. Tables 17 and 18 illustrate these comparisons.

TABLE 17.—*Relative standing of States and Alaska employing 1,000 men or more in metal mines, 1956*

FREQUENCY RATES[1]

		Excluding officeworkers							Including officeworkers								
Relative standing by employment	State	Men employed	Relative standing (fatalities)	State	Fatality rates[1]	Relative standing (nonfatal injuries)	State	Nonfatal injury rate[1]	Relative standing by employment	State	Men employed	Relative standing (fatalities)	State	Fatality rate[1]	Relative standing (nonfatal injuries)	State	Nonfatal injury rate[1]
1	Minnesota	11,973	1	Minnesota	.25	1	Minnesota	6.83	1	Minnesota	12,468	1	Minnesota	.24	1	Minnesota	6.53
2	Michigan	8,510	2	Arizona	.35	2	Alabama	7.80	2	Michigan	8,803	2	Arizona	.34	2	Alabama	7.65
3	Arizona	7,911	3	South Dakota	.38	3	New York	13.12	3	Arizona	8,256	3	New Mexico	.36	3	New York	11.87
4	Montana	5,912	4	New Mexico	.42	4	Utah	25.44	4	Montana	6,265	4	Missouri	.38	4	Utah	23.09
5	Utah	4,649	5	Utah	.43	5	Tennessee	25.74	5	Utah	5,191	5	South Dakota	.38	5	Tennessee	25.16
6	Colorado	3,493	6	Alabama	.43	6	Montana	31.58	6	Colorado	3,918	6	Utah	.39	6	Montana	29.49
7	Alabama	3,224	7	Tennessee	.47	7	Michigan	31.76	7	Alabama	3,271	7	Alabama	.42	7	Missouri	30.85
8	Idaho	2,595	8	Missouri	.49	8	Missouri	39.88	8	Idaho	2,686	8	Tennessee	.46	8	Michigan	30.97
9	Nevada	2,443	9	Alaska	.53	9	Arizona	40.01	9	Missouri	2,672	9	Alaska	.51	9	Arizona	38.31
10	California	2,247	10	Michigan	.61	10	Wisconsin	46.26	10	Nevada	2,631	10	Michigan	.59	10	Wisconsin	45.55
11	Missouri	2,083	11	Nevada	.68	11	South Dakota	52.45	11	California	2,337	11	Nevada	.63	11	South Dakota	52.19
12	New Mexico	1,913	12	California	.75	12	Nevada	61.45	12	New Mexico	2,207	12	California	.72	12	New Mexico	53.44
13	Wisconsin	1,373	13	Wisconsin	.76	13	New Mexico	62.36	13	New York	1,448	13	Wisconsin	.75	13	Nevada	56.82
14	New York	1,304	14	Montana	.92	14	Colorado	68.99	14	Wisconsin	1,393	14	Montana	.86	14	Colorado	59.94
15	Alaska	1,175	15	Idaho	1.24	15	Alaska	71.66	15	Alaska	1,203	15	Colorado	1.13	15	Alaska	69.06
16	South Dakota	1,092	16	Colorado	1.30	16	California	72.63	16	Tennessee	1,113	16	Idaho	1.19	16	California	69.64
17	Tennessee	1,079	17	New York	1.82	17	Idaho	116.24	17	South Dakota	1,100	17	New York	1.65	17	Idaho	112.05
	U.S. total[2]	68,273		U.S. average fatalities.	.62		U.S. average nonfatal injuries.	37.91		U.S. total[2]	72,588		U.S. average fatalities.	.58		U.S. average nonfatal injuries.	35.54
		SEVERITY RATES[3]															
1	Minnesota	11,973	1	Minnesota	1,498.55	1	Minnesota	698.95	1	Minnesota	12,468	1	Minnesota	1,433.81	1	Minnesota	668.75
2	Michigan	8,510	2	Arizona	2,111.43	2	New York	844.69	2	Michigan	8,803	2	Arizona	2,021.79	2	New York	764.15
3	Arizona	7,908	3	South Dakota	2,264.16	3	Alabama	1,143.19	3	Arizona	8,253	3	New Mexico	2,181.31	3	Montana	1,078.70
4	Montana	5,900	4	New Mexico	2,545.20	4	Montana	1,155.36	4	Montana	6,253	4	South Dakota	2,252.67	4	Alabama	1,121.53
5	Utah	4,649	5	Utah	2,586.87	5	Michigan	1,387.58	5	Utah	5,191	5	Missouri	2,257.66	5	Michigan	1,353.14
6	Colorado	3,493	6	Alabama	2,598.65	6	Wisconsin	1,736.34	6	Colorado	3,918	6	Utah	2,348.41	6	Wisconsin	1,709.69
7	Alabama	3,224	7	Tennessee	2,808.26	7	Arizona	2,284.42	7	Alabama	3,271	7	Alabama	2,549.42	7	Missouri	2,114.48
8	Nevada	2,441	8	Missouri	2,918.25	8	South Dakota	2,310.20	8	Missouri	2,672	8	Tennessee	2,744.97	8	Arizona	2,187.43
9	Idaho	2,250	9	Michigan	3,657.30	9	Tennessee	2,380.93	9	Idaho	2,641	9	Michigan	3,566.53	9	Utah	2,259.96
10	Missouri	2,083	10	Nevada	4,098.40	10	Utah	2,489.44	10	Nevada	2,629	10	Nevada	3,789.45	10	South Dakota	2,298.47
11	New Mexico	1,913	11	Wisconsin	4,550.36	11	California	2,641.05	11	New Mexico	2,207	11	Wisconsin	4,480.51	11	Tennessee	2,327.28
12	California	1,859	12	Montana	5,549.50	12	Missouri	2,733.19	12	California	1,941	12	Montana	5,181.24	12	New Mexico	2,411.80
13	Wisconsin	1,373	13	California	5,634.56	13	New Mexico	2,813.14	13	New York	1,448	13	California	5,371.94	13	California	2,517.95
14	New York	1,304	14	Idaho	7,548.56	14	Colorado	3,778.75	14	Wisconsin	1,393	14	Colorado	6,772.01	14	Colordao	3,283.30
15	South Dakota	1,092	15	Colorado	7,793.92	15	Nevada	4,541.88	15	Tennessee	1,113	15	Idaho	7,271.60	15	Nevada	4,199.50
16	Tennessee	1,079	16	New York	10,932.12	16	Idaho	4,633,56	16	South Dakota	1,100	16	New York	9,889.78	16	Idaho	4,463.55
	U.S. total, exclusive of placer mines[4]	66,734		U.S. average fatalities.	3,768.27		U.S. average nonfatal injuries.	2,036.22		U.S. total[4]	71,013		U.S. average fatalities.	3,530.29		U.S. average nonfatal injuries.	1,907.62

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[1] Based on fatal and nonfatal injuries per million man-hours.
[2] U.S. total represents all States regardless of number of men employed.
[3] Severity rates for Arizona, California, Idaho, Montana, Nevada, Oregon, and Alaska do not include placer mines.
[4] U.S. total represents all regardless of number of men employed excluding placer mines.

TABLE 18.—*Relative standing of States and Alaska employing 1,000 men or more in metal mines, 1957*

FREQUENCY RATES[1]

Relative standing by employment	State	Excluding officeworkers							Including officeworkers							
		Men employed	Relative standing (fatalities)	State	Fatality rates[1]	Relative standing (nonfatal injuries)	State	Nonfatal injury rates[1]	Relative standing by employment	State	Men employed	Relative standing (fatalities)	State	Fatality rate[1]	Relative standing (nonfatal injuries)	State	Nonfatal injury rate[1]
1	Minnesota	11,844	1	Wisconsin	--------	1	Wisconsin	--------	1	Minnesota	12,566	1	Wisconsin	--------	1	Wisconsin	--------
2	Michigan	8,494	2	Minnesota	.20	2	Minnesota	3.83	2	Michigan	8,622	2	Minnesota	.19	2	Minnesota	3.63
3	Arizona	8,130	3	South Dakota	.22	3	Alabama	7.51	3	Arizona	8,433	3	New Mexico	.21	3	Alabama	7.35
4	Montana	5,974	4	New Mexico	.23	4	Missouri	23.62	4	Montana	6,073	4	South Dakota	.22	4	Missouri	20.65
5	Utah	4,827	5	Alabama	.23	5	Utah	23.94	5	Utah	5,110	5	Alabama	.22	5	Utah	22.81
6	Colorado	3,863	6	Utah	.35	6	Montana	27.65	6	Colorado	4,319	6	Utah	.33	6	Montana	27.17
7	Idaho	3,522	7	Arizona	.37	7	South Dakota	29.02	7	Idaho	3,678	7	Arizona	.35	7	South Dakota	28.89
8	Alabama	2,618	8	Tennessee	.45	8	Tennessee	33.03	8	Missouri	2,765	8	Tennessee	.44	8	Tennessee	32.31
9	Missouri	2,418	9	Alaska	.54	9	Michigan	34.34	9	Alabama	2,667	9	Alaska	.52	9	Michigan	33.80
10	Nevada	2,071	10	Nevada	.65	10	Arizona	40.99	10	Nevada	2,335	10	Colorado	.58	10	California	39.19
11	New Mexico	1,938	11	Michigan	.66	11	California	44.48	11	New Mexico	2,060	11	Nevada	.58	11	Arizona	39.54
12	South Dakota	1,841	12	Colorado	.66	12	Nevada	47.94	12	South Dakota	1,851	12	Michigan	.65	12	Nevada	42.38
13	California	1,598	13	Montana	.70	13	New Mexico	56.75	13	California	1,805	13	Montana	.68	13	New Mexico	53.52
14	Wisconsin	1,338	14	Missouri	.87	14	Alaska	64.42	14	Wisconsin	1,370	14	Missouri	.76	14	Colorado	57.07
15	Alaska	1,180	15	Idaho	1.50	15	Colorado	65.25	15	Alaska	1,216	15	Idaho	1.43	15	Alaska	61.62
16	Tennessee	1,165	16	California	1.66	16	Idaho	75.88	16	Tennessee	1,192	16	California	1.46	16	Idaho	72.61
	U.S. total[2]	68,457		U.S. average fatalities.	.50		U.S. average, nonfatal injuries.	32.03		U.S. total[2]	72,133		U.S. average, fatalities.	.47		U.S. average, nonfatal injuries.	30.39

SEVERITY RATES[3]

Relative standing by employment	State	Excluding officeworkers							Including officeworkers							
		Men employed	Relative standing (fatalities)	State	Fatality rates[1]	Relative standing (nonfatal injuries)	State	Nonfatal injury rates[1]	Relative standing by employment	State	Men employed	Relative standing (fatalities)	State	Fatality rate[1]	Relative standing (nonfatal injuries)	State	Nonfatal injury rate[1]
1	Minnesota	11,844	1	Wisconsin	--------	1	Wisconsin	--------	1	Minnesota	12,566	1	Wisconsin	--------	1	Wisconsin	--------
2	Michigan	8,494	2	South Dakota	1,339.30	2	Minnesota	344.43	2	Michigan	8,622	2	New Mexico	1,274.60	2	Minnesota	325.91
3	Arizona	8,130	3	New Mexico	1,356.69	3	California	640.94	3	Arizona	8,433	3	South Dakota	1,333.53	3	California	559.40
4	Montana	5,974	4	Alabama	1,364.94	4	Alabama	757.09	4	Montana	6,073	4	Alabama	1,336.92	4	Alabama	741.54
5	Utah	4,827	5	Utah	2,081.35	5	New Mexico	1,004.40	5	Utah	5,110	5	Utah	1,976.56	5	New Mexico	943.63
6	Colorado	3,863	6	Arizona	2,190.30	6	South Dakota	1,458.05	6	Colorado	4,319	6	Arizona	2,112.98	6	Arizona	1,426.56
7	Idaho	3,522	7	Tennessee	2,714.75	7	Arizona	1,478.77	7	Idaho	3,678	7	Tennessee	2,655.81	7	South Dakota	1,451.76
8	Alabama	2,618	8	Nevada	3,985.24	8	Utah	1,688.41	8	Missouri	2,765	8	Nevada	3,517.99	8	Colorado	1,599.55
9	Missouri	2,418	9	Michigan	3,969.40	9	Colorado	1,828.90	9	Alabama	2,667	9	Colorado	3,481.06	9	Utah	1,605.46
10	Nevada	2,071	10	Colorado	3,980.20	10	Michigan	2,184.31	10	Nevada	2,335	10	Michigan	3,906.94	10	Missouri	2,034.82
11	New Mexico	1,938	11	Montana	4,183.94	11	Missouri	2,342.32	11	New Mexico	2,060	11	Montana	4,110.47	11	Michigan	2,149.94
12	South Dakota	1,841	12	Missouri	5,249.88	12	Montana	3,056.98	12	South Dakota	1,851	12	Missouri	4,547.08	12	Nevada	2,969.57
13	California	1,598	13	California	9,379.55	13	Nevada	3,363.99	13	California	1,805	13	California	8,186.33	13	Montana	3,003.30
14	Wisconsin	1,338	14	Minnesota	11,734.51	14	Idaho	4,671.72	14	Wisconsin	1,370	14	Minnesota	11,102.83	14	Idaho	4,468.54
15	Tennessee	1,165	15	Idaho	8,260.49	15	Tennessee	6,000.50	15	Tennessee	1,192	15	Idaho	7,901.24	15	Tennessee	5,870.23
	U.S. total,[4] exclusive of placer mines.	66,906		U.S. average, fatalities.	2,961.36		U.S. average, nonfatal injuries.	1,835.30		U.S. total[4]	70,527		U.S. average, fatalities.	2,807.99		U.S. average, nonfatal injuries.	1,740.64

[1] Based on fatal and nonfatal injuries per million man-hours.
[2] U.S. total represents all States regardless of number of men employed.
[3] Severity rates for Arizona, California, Colorado, Idaho, Montana, and Nevada do not include placer mines.
[4] U.S. total represents all States regardless of number of men employed, excluding placer mines.

TABLE 19.—*Active metal mines, men working, man-days and man-hours worked, and injuries and injury-frequency and severity rates at metal mines in the United States and Alaska, by work location and State, 1956*

State	Active mines	Men employed						Man-days worked						Man-hours worked					
		Underground	Opencut	Surface	Total	Office-workers	Grand total	Underground	Opencut	Surface	Total	Office-workers	Grand total	Underground	Opencut	Surface	Total	Office-workers	Grand total
Alabama	20	2,434	282	508	3,224	47	3,271	410,627	67,396	86,361	564,384	10,316	574,700	3,285,102	641,803	690,885	4,617,790	89,160	4,706,950
Alaska	161	55	79	1,041	1,175	28	1,203	6,907	10,823	198,585	216,315	8,458	224,773	61,000	100,128	1,736,700	1,897,828	71,589	1,969,417
Arizona	88	3,616	3,503	792	7,911	345	8,256	1,122,632	1,129,640	242,393	2,494,665	110,241	2,604,906	8,976,818	8,980,160	1,937,646	19,894,624	881,925	20,776,549
Arkansas	16	80	419	11	510	38	548	19,760	91,836	2,750	114,346	9,654	124,000	158,080	734,652	22,000	914,732	77,232	991,964
California	255	1,108	460	679	2,247	90	2,337	251,648	78,913	167,763	498,324	21,413	519,737	2,017,817	631,977	1,343,157	3,992,951	171,294	4,164,245
Colorado	346	2,899	81	513	3,493	425	3,918	731,964	10,925	123,117	866,006	130,906	996,912	5,854,969	87,961	985,546	6,928,476	1,045,518	7,973,994
Florida	4	......	154	......	154	59	213	......	47,350	......	47,350	15,629	62,979	......	377,673	......	377,673	125,034	502,707
Idaho	49	2,022	11	562	2,595	91	2,686	555,154	1,753	151,315	708,222	26,490	734,712	4,438,798	14,020	1,207,829	5,660,647	211,919	5,872,566
Kansas	21	301	3	35	339	1	340	84,269	390	9,906	94,565	308	94,873	671,962	3,120	78,836	753,918	2,464	756,382
Michigan	49	6,462	221	1,827	8,510	293	8,803	1,561,696	44,085	444,915	2,050,696	52,192	2,102,888	12,493,567	352,676	3,559,295	16,405,538	417,524	16,823,062
Minnesota	133	1,186	9,064	1,723	11,973	495	12,468	268,843	2,310,567	422,993	3,002,403	135,574	3,137,977	2,150,744	18,488,569	3,383,933	24,023,246	1,084,712	25,107,958
Missouri	17	1,682	93	308	2,083	589	2,672	424,882	12,976	76,148	514,006	150,400	664,406	3,399,058	103,801	609,190	4,112,049	1,203,196	5,315,245
Montana	59	4,638	17	1,257	5,912	353	6,265	1,377,123	2,096	378,425	1,757,644	124,872	1,882,516	11,016,668	14,920	3,027,800	14,059,388	998,976	15,058,364
Nevada	169	1,106	1,125	212	2,443	188	2,631	318,131	350,450	62,344	730,925	59,522	790,447	2,542,195	2,817,074	498,872	5,858,141	477,435	6,335,576
New Jersey	4	545	......	149	694	68	762	107,884	......	32,389	140,273	7,848	148,121	863,071	......	259,116	1,122,187	62,784	1,184,971
New Mexico	51	650	1,094	169	1,913	294	2,207	183,320	355,622	50,487	589,429	98,196	687,625	1,466,640	2,844,842	403,272	4,714,754	786,525	5,501,279
New York	8	805	347	152	1,304	144	1,448	200,440	103,745	36,340	340,525	36,392	376,917	1,623,516	829,968	290,722	2,744,206	289,228	3,033,434
North Carolina	5	461	5	80	546	34	580	140,051	1,040	22,909	164,000	10,298	174,298	1,120,404	8,320	183,279	1,312,003	82,380	1,394,383
Oklahoma	29	392	......	36	428	7	435	105,443	......	9,737	115,180	2,148	117,328	841,572	......	77,296	918,868	17,184	936,052
Oregon	30	69	67	12	148	15	163	15,522	14,939	2,186	32,647	4,219	36,866	124,259	119,328	17,398	260,985	33,748	294,733
South Dakota	10	894	11	187	1,092	8	1,100	272,402	1,506	57,341	331,249	1,722	332,971	2,179,217	12,046	458,728	2,649,991	13,516	2,663,507
Tennessee	22	815	89	175	1,079	34	1,113	207,512	13,946	44,286	265,744	6,057	271,801	1,660,112	122,149	354,296	2,136,557	49,258	2,185,815
Texas	5	22	133	80	235	8	243	6,314	31,838	19,185	57,337	2,239	59,576	50,512	256,906	153,482	460,900	18,640	479,540
Utah	128	1,616	2,722	311	4,649	542	5,191	441,557	923,053	84,363	1,448,973	147,520	1,596,493	3,537,126	7,384,421	675,461	11,597,008	1,177,571	12,774,579
Virginia	3	378	6	31	415	41	456	92,627	2,196	7,726	102,549	10,486	113,035	740,903	17,568	61,806	820,277	83,891	904,168
Washington	15	411	9	137	557	25	582	121,134	1,012	17,395	139,541	7,636	147,177	967,947	8,093	134,726	1,110,766	61,096	1,171,862
Wisconsin	11	1,007	24	342	1,373	20	1,393	243,209	3,561	82,870	329,643	5,139	334,782	1,945,676	28,515	662,965	2,637,156	41,111	2,678,267
Wyoming	31	220	112	94	426	2	428	50,652	19,561	21,477	91,690	451	92,141	405,216	172,977	171,816	750,009	3,608	753,617
Other States [1]	15	626	35	184	845	31	876	157,668	5,632	45,351	208,651	7,646	216,297	1,264,168	45,342	364,730	1,674,240	61,167	1,735,407
Total	1,754	36,500	20,160	11,607	68,273	4,315	72,588	9,479,371	5,636,854	2,901,057	18,017,282	1,203,972	19,221,254	75,857,117	45,199,009	23,350,782	144,406,908	9,639,685	154,046,593

State	Average hours worked per man-day						Average days active						Average hours worked per man per year					
	Under-ground	Open-cut	Surface	Total	Office-workers	Grand total	Under-ground	Open-cut	Surface	Total	Office-workers	Grand total	Under-ground	Open-cut	Surface	Total	Office-workers	Grand total
Alabama	8.0	9.5	8.0	8.2	8.6	8.2	169	239	170	175	219	176	1,350	2,276	1,360	1,432	1,897	1,439
Alaska	8.8	9.3	8.7	8.8	8.5	8.8	126	137	191	184	302	187	1,109	1,267	1,668	1,615	2,557	1,637
Arizona	8.0	7.9	8.0	8.0	8.0	8.0	310	322	306	315	320	316	2,483	2,564	2,447	2,515	2,557	2,517
Arkansas	8.0	8.0	8.0	8.0	8.0	8.0	247	219	250	224	254	226	1,976	1,753	2,000	1,794	2,032	1,810
California	8.0	8.0	8.0	8.0	8.0	8.0	227	172	247	222	238	222	1,821	1,374	1,978	1,777	1,903	1,782
Colorado	8.0	8.1	8.0	8.0	8.0	8.0	252	135	240	248	308	254	2,020	1,086	1,921	1,984	2,460	2,035
Florida	--------	8.0	--------	8.0	8.0	8.0	--------	307	--------	307	265	296	--------	2,452	--------	2,452	2,119	2,360
Idaho	8.0	8.0	8.0	8.0	8.0	8.0	275	159	269	273	291	274	2,195	1,275	2,149	2,181	2,329	2,186
Kansas	8.0	8.0	8.0	8.0	8.0	8.0	280	130	283	279	308	279	2,232	1,040	2,252	2,224	2,464	2,225
Michigan	8.0	8.0	8.0	8.0	8.0	8.0	242	199	244	241	178	239	1,933	1,596	1,948	1,928	1,425	1,911
Minnesota	8.0	8.0	8.0	8.0	8.0	8.0	227	255	245	251	274	252	1,813	2,040	1,964	2,006	2,191	2,014
Missouri	8.0	8.0	8.0	8.0	8.0	8.0	253	140	247	247	255	249	2,021	1,116	1,978	1,974	2,043	1,989
Montana	8.0	7.1	8.0	8.0	8.0	8.0	297	123	301	297	354	300	2,375	878	2,409	2,378	2,830	2,404
Nevada	8.0	8.0	8.0	8.0	8.0	8.0	288	312	294	299	317	300	2,299	2,504	2,353	2,398	2,540	2,408
New Jersey	8.0	--------	8.0	8.0	8.0	8.0	198	--------	217	202	115	194	1,584	--------	1,739	1,617	923	1,555
New Mexico	8.0	8.0	8.0	8.0	8.0	8.0	282	325	299	308	334	312	2,256	2,600	2,386	2,465	2,675	2,493
New York	8.1	8.0	8.0	8.1	7.9	8.0	249	299	239	261	253	260	2,017	2,392	1,913	2,105	2,009	2,095
North Carolina	8.0	8.0	8.0	8.0	8.0	8.0	304	208	286	300	303	301	2,430	1,664	2,291	2,403	2,423	2,404
Oklahoma	8.0	--------	7.9	8.0	8.0	8.0	269	--------	270	269	307	270	2,147	--------	2,147	2,147	2,455	2,152
Oregon	8.0	8.0	8.0	8.0	8.0	8.0	225	223	182	221	281	226	1,801	1,781	1,450	1,763	2,250	1,808
South Dakota	8.0	8.0	8.0	8.0	7.8	8.0	305	137	307	303	215	303	2,438	1,095	2,453	2,427	1,690	2,421
Tennessee	8.0	8.8	8.0	8.0	8.1	8.0	255	157	253	246	178	244	2,037	1,372	2,025	1,980	1,449	1,964
Texas	8.0	8.1	8.0	8.0	8.3	8.0	287	239	240	244	280	245	2,296	1,932	1,919	1,961	2,330	1,973
Utah	8.0	8.0	8.0	8.0	8.0	8.0	273	339	271	312	272	308	2,189	2,713	2,172	2,495	2,173	2,461
Virginia	8.0	8.0	8.0	8.0	8.0	8.0	245	366	249	247	256	248	1,960	2,928	1,994	1,977	2,046	1,983
Washington	8.0	8.0	7.7	8.0	8.0	8.0	295	112	127	251	305	253	2,355	899	983	1,994	2,444	2,014
Wisconsin	8.0	8.0	8.0	8.0	8.0	8.0	242	149	242	240	257	240	1,932	1,188	1,938	1,921	2,056	1,923
Wyoming	8.0	8.8	8.0	8.2	8.0	8.2	230	175	228	215	226	215	1,842	1,544	1,828	1,761	1,804	1,761
Other States [1]	8.0	8.1	8.0	8.0	8.0	8.0	252	161	246	247	247	247	2,019	1,295	1,982	1,981	1,973	1,981
Total	8.0	8.0	8.0	8.0	8.0	8.0	260	280	250	261	279	265	2,078	2,241	2,012	2,115	2,234	2,122

See footnotes at end of table.

TABLE 19.—*Active metal mines, men working, man-days and man-hours worked, and injuries and injury-frequency and severity rates at metal mines in the United States and Alaska, by work location and State, 1956*—Continued

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Open-cut	Surface	Total excluding office-workers	Total including office-workers	Underground	Open-cut	Surface	Total excluding office-workers	Total including office-workers	Underground	Open-cut	Surface	Total excluding office-workers	Total including office-workers	Underground	Open-cut	Surface	Total excluding office-workers	Total including office-workers
Alabama	2	--------	--------	2	2	33	3	--------	36	36	0.61	--------	--------	0.43	0.42	10.05	4.67	--------	7.80	7.65
Alaska	1	--------	--------	1	1	7	4	125	136	136	16.39	--------	--------	.53	.51	114.75	39.95	71.98	71.66	69.06
Arizona	7	--------	--------	7	7	594	144	58	796	796	.78	--------	--------	.35	.34	66.17	16.64	29.93	40.01	38.31
Arkansas	--------	1	--------	1	1	1	8	1	10	10	--------	1.36	--------	1.09	1.01	6.33	10.8[illegible]	45.45	10.93	10.08
California	1	1	1	3	3	196	49	45	290	290	.50	1.58	0.74	.75	.72	97.13	77.53	33.50	72.63	69.64
Colorado	9	--------	--------	9	9	421	1	56	478	478	1.54	--------	--------	1.30	1.13	71.90	11.37	56.82	68.90	59.94
Florida	--------	--------	--------	--------	--------	--------	4	--------	4	4	--------	--------	--------	--------	--------	--------	10.59	--------	10.59	7.96
Idaho	4	1	2	7	7	619	2	37	658	658	.90	71.33	1.66	1.24	1.19	139.45	142.65	30.63	116.24	112.05
Kansas	1	--------	--------	1	1	39	--------	2	41	41	1.49	--------	--------	1.33	1.32	58.04	--------	25.37	54.38	54.21
Michigan	10	--------	--------	10	10	485	6	30	521	521	.80	--------	--------	.61	.59	38.82	17.01	8.43	31.76	30.97
Minnesota	3	2	1	6	6	30	118	16	164	164	1.39	.11	.30	.25	.24	13.95	6.38	4.73	6.83	6.53
Missouri	1	1	--------	2	2	156	2	6	164	164	.29	9.63	--------	.49	.38	45.90	19.27	9.85	39.88	30.85
Montana	12	--------	1	13	13	389	--------	55	444	444	1.09	--------	.33	.92	.86	35.31	--------	18.17	31.58	29.49
Nevada	4	--------	--------	4	4	263	67	30	360	360	1.57	--------	--------	.68	.63	103.45	23.78	60.14	61.45	56.82
New Jersey	1	--------	--------	1	1	38	--------	4	42	42	1.16	--------	--------	.89	.84	44.03	--------	15.44	37.43	35.44
New Mexico	2	--------	--------	2	2	219	47	28	294	294	1.36	--------	--------	.42	.36	149.32	16.52	69.43	62.36	53.44
New York	5	--------	--------	5	5	26	7	3	36	36	3.08	--------	--------	1.82	1.65	16.01	8.43	10.32	13.12	11.87
North Carolina	2	--------	--------	2	2	75	--------	10	85	85	1.79	--------	--------	1.52	1.43	66.94	--------	54.56	64.79	60.96
Oklahoma	1	--------	--------	1	1	39	--------	1	40	40	1.19	--------	--------	1.09	1.07	46.34	--------	12.94	43.53	42.73
Oregon	--------	--------	--------	--------	--------	16	2	2	20	20	--------	--------	--------	--------	--------	128.76	16.76	114.96	76.63	67.86
South Dakota	1	--------	--------	1	1	106	--------	33	139	139	.46	--------	--------	.38	.38	48.64	--------	71.94	52.45	52.19
Tennessee	1	--------	--------	1	1	47	--------	8	55	55	.60	--------	--------	.47	.46	28.31	--------	22.58	25.74	25.16
Texas	--------	--------	--------	--------	--------	2	2	1	5	5	--------	--------	--------	--------	--------	39.59	7.78	6.52	10.85	10.43
Utah	2	2	1	5	5	238	30	27	295	295	.57	.27	1.48	.43	.39	67.29	4.06	39.97	25.44	23.09
Virginia	--------	--------	--------	--------	--------	36	--------	3	39	39	--------	--------	--------	--------	--------	48.59	--------	48.54	47.54	43.13
Washington	2	--------	--------	2	2	122	--------	6	128	128	2.07	--------	--------	1.80	1.71	126.04	--------	44.53	115.24	109.23
Wisconsin	1	--------	1	2	2	109	--------	13	122	122	.51	--------	1.51	.76	.75	56.02	--------	19.61	46.26	45.55
Wyoming	--------	--------	--------	--------	--------	24	3	1	28	28	--------	--------	--------	--------	--------	59.23	17.34	5.82	37.33	37.15
Other States [1]	1	--------	--------	1	1	40	1	4	45	45	.79	--------	--------	.60	.58	31.64	22.05	10.97	26.88	25.93
Total	74	8	7	89	89	4,370	500	605	5,475	5,475	.98	.18	.30	.62	.58	57.61	11.06	25.91	37.91	35.54

State	Injury-frequency rates per million man-hours					Severity rates per million man-hours [2]														
	Total					Fatal					Nonfatal					Total				
	Underground	Open-cut	Surface	Total excluding office-workers	Total including office-workers	Underground	Open-cut	Surface	Total excluding office-workers	Total including office-workers	Underground	Open-cut	Surface	Total excluding office-workers	Total including office-workers	Underground	Open-cut	Surface	Total excluding office-workers	Total including office-workers
Alabama	10.65	4.67	--------	8.23	8.07	3,652.85	--------	--------	2,598.65	2,549.42	1,592.04	76.35	--------	1,143.19	1,121.53	5,244.89	76.35	--------	3,741.83	3,670.95
Alaska	131.15	39.95	71.98	72.19	69.56	98,360.66	--------	--------	55,699.96	55,699.96	1,065.57	1,139.24	12,416.28	5,161.53	5,161.53	99,426.23	1,139.24	12,416.28	60,861.49	60,861.49
Arizona	66.95	16.04	29.93	40.36	38.65	4,678.72	--------	--------	2,111.43	2,021.79	3,320.44	1,184.50	2,582.74	2,284.42	2,187.43	7,999.16	1,184.50	2,582.74	4,395.84	4,209.22
Arkansas	6.33	12.25	45.45	12.03	11.09	--------	8,167.13	--------	6,559.30	6,048.61	569.33	393.38	227.27	419.80	387.11	569.33	8,560.52	227.27	6,979.09	6,435.72
California	97.63	79.12	34.25	73.38	70.36	2,989.88	9,513.77	10,769.40	5,634.56	5,371.94	1,969.33	3,933.94	3,596.98	2,641.05	2,517.95	4,959.22	13,447.71	14,366.38	8,275.61	7,889.89
Colorado	73.44	11.37	56.82	70.29	61.07	9,222.94	--------	--------	7,793.92	6,772.01	4,073.98	79.58	2,355.04	3,778.75	3,283.30	13,296.91	79.58	2,355.04	11,572.67	10,055.31
Florida	--------	10.59	--------	10.59	7.96	--------	--------	--------	--------	--------	--------	1,972.61	--------	1,972.61	1,481.98	--------	1,972.61	--------	1,972.61	1,481.98
Idaho	140.35	213.98	32.29	117.48	113.24	5,406.87	483,091.79	10,784.00	7,548.56	7,271.60	4,283.37	161.03	6,080.38	4,633.56	4,463.55	9,690.24	483,252.82	16,864.37	12,182.11	11,735.15
Kansas	59.53	--------	25.37	55.71	55.53	8,929.08	--------	--------	7,958.43	7,932.50	4,769.61	--------	405.91	4,293.57	4,279.58	13,698.69	--------	405.91	12,252.00	12,212.08
Michigan	39.62	17.01	8.43	32.37	31.56	4,802.47	--------	--------	3,657.30	3,566.53	1,413.61	309.07	1,403.09	1,387.58	1,353.14	6,216.08	309.07	1,403.09	5,044.88	4,919.68
Minnesota	15.34	6.49	5.02	7.08	6.77	5,579.46	649.05	3,546.17	1,498.55	1,433.81	546.32	787.78	310.59	698.95	668.75	6,125.79	1,436.83	3,856.75	2,197.50	2,102.56
Missouri	46.19	28.90	9.85	40.37	31.23	1,765.19	57,802.91	--------	2,918.25	2,257.66	3,228.84	539.49	341.44	2,733.19	2,114.48	4,994.03	58,342.41	341.44	5,651.44	4,372.14
Montana	36.40	--------	18.50	32.50	30.35	6,535.55	--------	1,983.60	5,549.50	5,181.24	1,349.05	--------	455.24	1,155.36	1,078.70	7,884.60	--------	2,438.84	6,704.86	6,259.94
Nevada	105.03	23.78	60.14	62.14	57.45	9,440.66	--------	--------	4,098.40	3,789.45	8,974.13	1,144.09	1,127.50	4,541.88	4,199.50	18,414.80	1,144.09	1,127.50	8,640.29	7,988.95
New Jersey	45.19	--------	15.44	38.32	36.29	6,951.92	--------	--------	5,346.70	5,063.42	900.27	--------	362.77	776.16	735.01	7,852.19	--------	362.77	6,122.87	5,798.45
New Mexico	150.68	16.52	69.43	62.78	53.81	8,181.97	--------	--------	2,545.20	2,181.31	8,381.74	208.10	949.73	2,814.14	2,411.80	16,563.71	208.10	949.73	5,359.35	4,593.11
New York	19.09	8.43	10.32	14.94	13.52	18,478.41	--------	--------	10,932.12	9,889.78	1,059.43	516.89	581.31	844.69	764.15	19,537.84	516.89	581.31	11,776.81	10,653.93
North Carolina	68.73	--------	54.56	66.31	62.39	10,710.42	--------	--------	9,146.32	8,605.96	1,134.41	--------	1,740.52	1,211.89	1,140.29	11,844.83	--------	1,740.52	10,358.21	9,746.25
Oklahoma	47.53	--------	12.94	44.62	43.80	7,129.51	--------	--------	6,529.77	6,409.90	10,599.21	--------	517.49	9,751.13	9,572.12	17,728.73	--------	517.49	16,280.90	15,982.02
Oregon	128.76	16.76	114.96	76.63	67.86	--------	--------	--------	--------	--------	2,341.88	42.26	3,022.93	1,326.69	1,173.11	2,341.88	41.90	2,643.98	1,310.42	1,160.37
South Dakota	49.10	--------	71.94	52.83	52.56	2,753.28	--------	--------	2,264.16	2,252.67	2,456.39	--------	1,676.37	2,310.20	2,298.47	5,209.67	--------	1,676.37	4,574.36	4,551.14
Tennessee	28.91	--------	22.58	26.21	25.62	3,614.21	--------	--------	2,808.26	2,744.97	2,769.09	--------	1,383.62	2,380.93	2,327.28	6,383.30	--------	1,383.02	5,189.19	5,072.25
Texas	39.59	7.78	6.52	10.85	10.43	--------	--------	--------	--------	--------	118.78	362.00	6.52	216.97	208.53	118.78	362.00	6.52	216.97	208.53
Utah	67.85	4.33	41.45	25.87	23.48	3,392.58	1,625.04	8,882.82	2,586.87	2,348.41	4,140.65	1,858.24	743.20	2,489.44	2,259.96	7,533.23	3,483.28	9,626.02	5,076.31	4,608.37
Virginia	48.59	--------	48.54	47.54	43.13	--------	--------	--------	--------	--------	1,318.66	--------	501.57	1,228.85	1,114.84	1,318.66	--------	501.57	1,228.85	1,114.84
Washington	128.11	--------	44.53	117.04	110.93	12,397.37	--------	--------	10,803.36	10,240.11	1,863.74	--------	16,284.90	3,599.32	3,411.66	14,261.11	--------	16,284.90	14,402.67	13,651.78
Wisconsin	56.54	--------	21.12	47.02	46.30	3,083.76	--------	9,050.25	4,550.36	4,480.51	2,076.91	--------	811.51	1,736.31	1,709.67	5,160.67	--------	9,861.76	6,286.70	6,190.20
Wyoming	59.23	17.34	5.82	37.33	37.15	--------	--------	--------	--------	--------	1,517.71	179.21	116.40	887.99	883.74	1,517.71	179.21	116.40	887.99	883.74
Other States [1]	32.43	22.05	10.97	27.48	26.51	4,746.20	--------	--------	3,583.72	3,457.40	753.06	441.09	353.69	657.61	634.43	5,499.27	441.09	353.69	4,241.33	4,091.84
Total	58.58	11.24	26.21	38.53	36.12	5,774.85	1,064.26	2,311.97	3,768.27	3,530.29	2,781.49	1,043.51	1,470.12	2,036.22	1,907.62	8,556.34	2,107.77	3,782.09	5,804.49	5,437.91

[1] Includes Georgia, Illinois, Kentucky, North Dakota, Pennsylvania, and Vermont.

[2] Severity rates do not include placer mining.

TABLE 20.—*Active metal mines, men working, man-days and man-hours worked, and injuries and injury-frequency and severity rates at metal mines in the United States and Alaska, by work location and State, 1957*

State	Active mines	Men employed						Man-days worked						Man-hours worked					
		Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total
Alabama	28	2,020	217	381	2,618	49	2,667	410,993	50,022	80,501	541,516	11,138	552,654	3,287,947	463,856	644,002	4,395,805	92,139	4,487,944
Alaska	137	55	47	1,078	1,180	36	1,216	10,345	6,085	203,438	219,868	10,529	230,397	84,834	55,044	1,707,232	1,847,110	84,035	1,931,145
Arizona	144	3,778	3,342	1,010	8,130	303	8,433	1,142,762	959,108	299,872	2,401,742	88,023	2,489,765	9,141,852	7,634,240	2,400,044	19,176,136	701,707	19,877,843
Arkansas	12	129	192	19	340	6	346	29,248	33,685	4,208	67,141	1,576	68,717	234,141	270,283	33,664	538,088	12,608	550,696
California	226	695	380	523	1,598	207	1,805	133,862	54,361	113,338	301,561	10,897	312,458	1,063,402	435,090	906,891	2,405,383	325,023	2,730,406
Colorado	255	3,184	81	598	3,863	456	4,319	786,679	12,817	142,593	942,089	135,152	1,077,241	6,292,316	102,207	1,145,498	7,540,021	1,080,762	8,620,783
Florida	4	----------	89	----------	89	44	133	----------	26,134	----------	26,134	11,186	37,320	----------	212,822	----------	212,822	89,482	302,304
Georgia	19	----------	130	----------	130	3	133	----------	22,984	----------	22,984	858	23,842	----------	194,999	----------	194,999	7,766	202,765
Idaho	113	2,801	27	694	3,522	156	3,678	738,481	3,929	175,214	917,624	41,402	959,026	5,908,139	31,622	1,401,155	7,340,916	330,258	7,671,174
Illinois	4	50	----------	27	77	19	96	13,826	----------	7,826	21,652	4,835	26,487	110,608	----------	62,608	173,216	37,676	210,892
Kansas	12	198	----------	26	224	----------	224	45,692	----------	5,681	51,373	----------	51,373	365,939	----------	45,046	410,985	----------	410,985
Michigan	52	6,373	214	1,907	8,494	128	8,622	1,565,611	45,013	467,744	2,078,368	33,225	2,111,593	12,524,926	360,074	3,742,201	16,627,201	265,806	16,893,007
Minnesota	177	1,367	8,898	1,579	11,844	722	12,566	331,432	2,406,051	456,931	3,194,414	181,603	3,376,017	2,651,456	19,259,819	3,655,439	25,566,714	1,453,428	27,020,142
Missouri	36	1,925	205	288	2,418	347	2,765	482,009	17,687	70,002	569,698	88,923	658,621	3,856,073	155,439	560,017	4,571,529	706,584	5,278,113
Montana	166	4,313	162	1,499	5,974	99	6,073	1,012,769	37,321	387,670	1,437,760	25,630	1,463,390	8,099,893	298,241	3,102,145	11,500,279	205,040	11,705,319
Nevada	133	794	1,062	215	2,071	264	2,335	200,299	330,621	42,596	573,516	75,164	648,680	1,591,654	2,657,183	339,888	4,588,725	602,300	5,191,025
New Jersey	3	305	----------	106	411	6	417	77,548	----------	26,987	104,535	9,164	113,699	620,389	----------	215,897	836,286	73,312	909,598
New Mexico	78	650	1,065	223	1,938	122	2,060	150,241	343,602	57,991	551,834	35,566	587,400	1,203,604	2,749,273	469,660	4,422,537	284,832	4,707,369
New York	10	441	400	134	978	169	1,147	188,121	122,393	32,585	343,099	45,319	388,418	1,494,971	979,139	260,679	2,734,789	362,547	3,097,336
North Carolina	4	475	4	90	569	24	593	113,721	780	23,359	137,860	5,764	143,624	909,768	6,240	186,872	1,102,880	46,102	1,148,982
Oklahoma	35	333	----------	40	373	8	381	47,212	----------	5,356	52,568	1,576	54,144	375,161	----------	42,658	417,819	12,926	430,745
Oregon	78	83	106	11	200	4	204	17,013	23,543	1,933	42,489	775	43,264	135,161	188,482	14,998	338,641	5,905	344,546
Pennsylvania	3	546	----------	29	575	----------	575	123,996	----------	6,583	130,579	----------	130,579	991,966	----------	52,664	1,044,630	----------	1,044,630
South Dakota	15	953	13	875	1,841	10	1,851	289,765	1,015	269,214	559,994	2,424	562,418	2,318,122	8,123	2,153,715	4,479,960	19,392	4,499,352
Tennessee	25	849	94	222	1,165	27	1,192	214,056	9,545	52,296	275,897	6,131	282,028	1,712,159	79,621	418,368	2,210,148	49,048	2,259,196
Texas	4	----------	128	48	176	6	182	----------	33,532	12,386	45,918	1,690	47,608	----------	273,928	99,084	373,012	14,245	387,257
Utah	167	1,810	2,615	402	4,827	283	5,110	469,521	868,959	101,925	1,440,405	76,535	1,516,940	3,759,366	6,955,886	815,725	11,530,977	611,322	12,142,299
Virginia	14	294	110	27	431	51	482	69,878	8,316	6,518	84,712	10,752	95,464	559,024	69,350	52,144	680,518	86,016	766,534
Washington	20	321	36	69	426	22	448	93,208	7,282	20,136	120,626	5,657	126,283	745,736	58,255	161,091	965,082	45,251	1,010,333
Wisconsin	19	977	22	339	1,338	32	1,370	246,407	2,915	86,578	335,900	8,301	344,201	1,971,250	23,322	692,629	2,687,201	66,408	2,753,609
Wyoming	33	255	115	110	480	7	487	62,168	24,116	25,787	112,071	1,231	113,302	497,382	212,024	207,016	916,422	9,968	926,390
Other States [1]	3	125	15	17	157	36	193	36,156	3,779	4,847	44,782	9,422	54,204	289,245	31,672	28,777	349,694	75,379	425,073
Total	2,029	36,102	19,769	12,586	68,457	3,676	72,133	9,103,019	5,455,595	3,192,095	17,750,709	969,848	18,720,557	72,796,487	43,766,231	25,617,807	142,180,525	7,757,267	149,937,792

State	Average hours worked per man-day						Average days active						Average hours worked per man per year					
	Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total
Alabama	8.00	9.27	8.00	8.12	8.27	8.12	203	231	211	207	227	207	1,628	2,138	1,690	1,679	1,880	1,683
Alaska	8.20	9.05	8.39	8.40	7.98	8.38	188	129	189	186	292	189	1,542	1,171	1,584	1,565	2,334	1,588
Arizona	8.00	7.96	8.00	7.98	7.97	7.98	302	287	297	295	291	295	2,420	2,284	2,376	2,359	2,316	2,357
Arkansas	8.01	8.02	8.00	8.01	8.00	8.01	227	175	221	197	263	199	1,815	1,408	1,772	1,583	2,101	1,592
California	7.94	8.00	8.00	7.98	7.95	7.97	193	143	217	189	198	190	1,530	1,145	1,734	1,505	1,570	1,513
Colorado	8.00	7.97	8.03	8.00	8.00	8.02	247	158	238	244	296	249	1,976	1,262	1,916	1,952	2,370	1,996
Florida	--------	8.14	--------	8.14	8.00	8.10	--------	294	--------	294	254	281	--------	2,391	--------	2,391	2,034	2,273
Georgia	--------	8.48	--------	8.48	9.05	8.50	--------	177	--------	177	286	179	--------	1,500	--------	1,500	2,589	1,525
Idaho	8.00	8.05	8.00	8.00	7.98	8.00	264	146	252	261	265	261	2,109	1,171	2,019	2,084	2,117	2,086
Illinois	8.00	--------	8.00	8.00	7.79	7.96	277	--------	290	281	254	276	2,212	--------	2,319	2,250	1,983	2,197
Kansas	8.01	--------	7.93	8.00	--------	8.00	231	--------	219	229	--------	229	1,848	--------	1,733	1,835	--------	1,835
Michigan	8.00	8.00	8.00	8.00	8.00	8.00	246	210	245	245	260	245	1,965	1,683	1,962	1,958	2,077	1,959
Minnesota	8.00	8.00	8.00	8.00	8.00	8.00	242	270	289	270	252	269	1,940	2,165	2,315	2,159	2,013	2,150
Missouri	8.00	8.79	8.00	8.02	8.00	8.02	250	86	243	236	255	238	2,003	758	1,945	1,891	2,036	1,909
Montana	8.00	7.99	8.00	8.00	8.00	8.00	235	230	259	241	259	241	1,878	1,841	2,069	1,925	2,071	1,927
Nevada	7.95	8.04	7.98	8.00	8.01	8.00	252	311	198	277	285	278	2,005	2,502	1,581	2,216	2,281	2,223
New Jersey	8.00	--------	8.00	8.00	8.00	8.00	254	--------	255	254	255	254	2,034	--------	2,037	2,035	2,036	2,035
New Mexico	8.01	8.00	8.10	8.01	8.01	8.01	231	323	260	285	292	285	1,852	2,581	2,106	2,282	2,335	2,285
New York	7.95	8.00	8.00	7.97	8.00	7.97	324	306	243	351	268	339	3,367	2,448	1,945	2,796	2,151	2,700
North Carolina	8.00	8.00	8.00	8.00	8.00	8.00	239	195	260	242	240	242	1,915	1,560	2,076	1,938	1,921	1,938
Oklahoma	7.95	--------	7.96	7.95	8.20	7.96	142	--------	134	141	197	142	1,127	--------	1,066	1,120	1,616	1,131
Oregon	7.94	8.01	7.76	7.97	7.62	7.96	205	222	176	212	194	212	1,628	1,778	1,363	1,693	1,476	1,689
Pennsylvania	8.00	--------	8.00	8.00	--------	8.00	227	--------	227	227	--------	227	1,817	--------	1,816	1,817	--------	1,817
South Dakota	8.00	8.00	8.00	8.00	8.00	8.00	304	78	308	304	242	304	2,432	625	2,461	2,433	1,939	2,431
Tennessee	8.00	8.34	8.00	8.01	8.00	8.01	252	102	236	237	227	237	2,017	847	1,885	1,897	1,817	1,895
Texas	--------	8.17	8.00	8.12	8.43	8.13	--------	262	258	261	282	262	--------	2,140	2,064	2,119	2,374	2,128
Utah	8.01	8.00	8.00	8.01	8.00	8.00	259	332	254	298	270	297	2,077	2,660	2,029	2,389	2,160	2,376
Virginia	8.00	8.34	8.00	8.03	8.00	8.03	238	76	241	197	211	198	1,901	630	1,931	1,579	1,687	1,590
Washington	8.00	8.00	8.00	8.00	8.00	8.00	290	202	292	283	257	282	2,323	1,618	2,335	2,265	2,057	2,255
Wisconsin	8.00	8.00	8.00	8.00	8.00	8.00	252	133	255	251	259	251	2,018	1,060	2,043	2,008	2,075	2,010
Wyoming	8.00	8.79	8.03	8.18	8.10	8.18	244	210	234	233	176	233	1,951	1,844	1,882	1,909	1,424	1,902
Other States [1]	8.00	8.38	5.94	7.81	8.00	7.84	289	252	285	285	262	281	2,314	2,111	1,693	2,227	2,094	2,202
Total	8.00	8.02	8.03	8.01	8.00	8.01	252	276	254	259	264	260	2,016	2,214	2,035	2,077	2,110	2,079

[1] See footnote at end of table.

TABLE 20.—*Active metal mines, men working, man-days and man-hours worked, and injuries and injury-frequency and severity rates at metal mines in the United States and Alaska, by work location and State, 1957*—Continued

State	Injuries										Injury-frequency rates per million man-hours				
	Fatal					Nonfatal					Fatal				
	Underground	Opencut	Surface	Total excluding office-workers	Total including office-workers	Underground	Opencut	Surface	Total excluding office-workers	Total including office-workers	Underground	Opencut	Surface	Total excluding office-workers	Total including office-workers
Alabama		1		1	1	29	4		33	33		2.16		0.23	0.22
Alaska	1			1	1	8	6	105	119	119	11.79			.54	.52
Arizona	5	1	1	7	7	628	88	70	786	786	.55	.13	0.42	.37	.35
Arkansas						4	13	8	25	25					
California	2		2	4	4	65	6	36	107	107	1.88		2.21	1.66	1.46
Colorado	5			5	5	441	2	49	492	492	.79			.66	.58
Florida							6		6	6					
Georgia															
Idaho	10		1	11	11	505	2	50	557	557	1.69		.71	1.50	1.43
Illinois															
Kansas						16			16	16					
Michigan	11			11	11	528	3	40	571	571	.88			.66	.65
Minnesota	1	4		5	5	30	61	7	98	98	.38	.21		.20	.19
Missouri	3	1		4	4	96	4	8	108	109	.78	6.43		.87	.75
Montana	6	1	1	8	8	285	4	29	318	318	.74	3.35	.32	.70	.68
Nevada	2	1		3	3	122	78	20	220	220	1.26	.38		.65	.58
New Jersey						35		3	38	38					
New Mexico	1			1	1	199	36	16	251	251	.83			.23	.21
New York	2			2	2	44	9	2	55	55	1.34			.73	.65
North Carolina						59		7	66	66					
Oklahoma						8		1	9	9					
Oregon						10	4	5	19	19					
Pennsylvania						5		3	8	8					
South Dakota	1			1	1	111	1	18	130	130	.43			.22	.22
Tennessee	1			1	1	70	1	2	73	73	.58			.45	.44
Texas							1		1	1					
Utah	3	1		4	4	224	30	22	276	277	.80	.14		.35	.33
Virginia	1			1	1	49	3	1	53	53	1.79			1.47	1.30
Washington	1			1	1	69	1	8	78	78	1.34			1.04	99
Wisconsin															
Wyoming						18	7	6	31	31					
Other States[1]						9	1		10	10					
Total	56	10	5	71	71	3,667	371	516	4,554	4,556	.77	.23	.20	.50	.47

State	Injury-frequency rates per million man-hours					Severity rates per million man-hours[2]									
	Nonfatal					Fatal					Nonfatal				
	Underground	Opencut	Surface	Total excluding office-workers	Total including office-workers	Underground	Opencut	Surface	Total excluding office-workers	Total including office-workers	Underground	Opencut	Surface	Total excluding office-workers	Total including office-workers
Alabama	8.82	8.62	-----	7.51	7.35	-----	12,935.05	-----	1,364.94	1,336.92	962.30	353.56	-----	757.09	741.54
Alaska	94.30	109.00	61.50	64.42	61.62	71,999.42	-----	-----	33,239.89	31,510.95	1,739.99	1,319.10	242.86	1,218.80	1,155.40
Arizona	68.70	11.53	29.17	40.99	39.54	3,281.61	785.93	2,500.70	2,190.30	2,112.98	2,529.79	449.68	748.54	1,478.77	1,426.56
Arkansas	17.08	48.10	237.64	46.46	45.40	-----	-----	-----	-----	-----	196.46	8,346.90	4,515.21	4,560.59	4,456.18
California	61.12	13.79	39.70	44.48	39.19	-----	-----	41,939.86	9,379.55	8,186.33	954.87	257.48	251.64	640.94	559.40
Colorado	70.09	19.57	42.78	65.25	57.07	4,767.72	-----	-----	3,980.20	3,481.06	2,074.28	19.57	639.66	1,828.90	1,599.55
Florida	-----	28.19	-----	28.19	19.85	-----	-----	-----	-----	-----	-----	2,161.43	-----	2,161.43	1,521.65
Georgia	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Idaho	85.48	63.25	35.68	75.88	72.61	10,155.48	-----	-----	8,260.49	7,901.24	4,788.14	1,131.94	4,214.46	4,671.72	4,468.54
Illinois	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Kansas	43.72	-----	-----	38.93	38.93	-----	-----	-----	-----	-----	986.50	-----	-----	878.38	878.38
Michigan	42.16	8.33	10.69	34.34	33.80	5,269.49	-----	-----	3,969.40	3,906.94	2,651.11	1,199.75	716.69	2,184.31	2,149.94
Minnesota	11.31	3.17	1.91	3.83	3.63	2,262.91	1,246.12	-----	1,173.40	1,110.28	665.67	355.71	51.98	344.43	325.91
Missouri	24.90	25.73	14.29	23.62	20.65	4,667.96	38,600.35	-----	5,249.88	4,547.08	2,736.20	160.83	235.71	2,342.32	2,084.82
Montana	35.19	13.41	9.35	27.65	27.17	2,963.87	20,214.41	5,847.73	4,183.94	4,110.47	3,560.35	501.99	1,979.13	3,056.98	3,003.30
Nevada	76.65	29.35	58.84	47.94	42.38	7,539.33	2,260.89	-----	3,985.24	3,517.99	5,854.29	1,721.67	4,819.61	3,363.99	2,969.57
New Jersey	56.42	-----	13.90	45.44	41.78	-----	-----	-----	-----	-----	607.68	-----	18.53	455.59	418.87
New Mexico	165.34	13.09	34.07	56.75	53.32	4,985.03	-----	-----	1,356.69	1,274.60	3,330.83	116.76	238.47	1,004.40	943.63
New York	29.43	9.19	7.67	20.11	17.76	8,026.91	-----	-----	4,387.91	3,874.30	3,153.91	185.88	3,506.23	2,124.84	1,876.13
North Carolina	64.85	-----	37.46	59.84	57.44	-----	-----	-----	-----	-----	2,795.22	-----	668.91	2,419.12	2,322.06
Oklahoma	21.32	-----	23.44	21.46	20.82	-----	-----	-----	-----	-----	20,047.39	-----	703.27	18,072.42	17,530.09
Oregon	73.99	21.22	333.38	56.11	55.15	-----	-----	-----	-----	-----	1,065.40	159.13	18,538.71	1,384.47	1,357.07
Pennsylvania	5.04	-----	56.96	7.66	7.66	-----	-----	-----	-----	-----	187.51	-----	721.56	214.43	214.43
South Dakota	47.88	123.11	8.36	29.02	28.89	2,588.30	-----	-----	1,339.30	1,333.53	2,340.69	1,231.07	508.89	1,458.05	1,451.76
Tennessee	40.88	12.56	4.78	33.03	32.31	3,504.35	-----	-----	2,714.75	2,655.81	7,622.54	1,130.36	289.22	6,000.50	5,870.23
Texas	-----	3.65	-----	2.68	2.58	-----	-----	-----	-----	-----	-----	708.22	-----	520.09	500.96
Utah	59.58	4.31	26.97	23.94	22.81	4,788.04	862.58	-----	2,081.35	1,976.56	3,494.21	831.81	670.57	1,688.41	1,605.46
Virginia	87.65	43.26	19.18	77.88	69.14	10,732.99	-----	-----	8,816.81	7,827.44	2,924.74	1,499.64	19.18	2,556.88	2,269.96
Washington	92.53	17.17	49.66	80.82	77.20	8,045.74	-----	-----	6,217.09	5,938.64	1,137.13	257.49	10,130.92	2,585.27	2,469.48
Wisconsin	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Wyoming	36.19	33.02	28.98	33.83	33.46	-----	-----	-----	-----	-----	1,053.52	1,745.09	144.92	1,008.27	997.42
Other States[1]	31.12	33.25	-----	28.73	23.61	-----	-----	-----	-----	-----	764.06	1,010.36	-----	723.49	595.19
Total	50.37	8.48	20.14	32.03	30.39	4,286.42	1,373.10	1,801.33	2,961.36	2,807.99	2,846.62	583.64	1,023.89	1,835.30	1,740.64

[1] Includes Mississippi, South Carolina, and Vermont. Delaware office workers only included in other States.

[2] Severity rates do not include placer mining.

TABLE 21.—*All metal mines: Injuries in the United States and Alaska, by States and severity of injury, 1956*

State	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal injuries	Total all injuries	Office-workers	Grand total
Alabama	2	--------	7	29	36	38	--------	38
Alaska	1	--------	3	133	136	137	--------	137
Arizona	7	1	46	749	796	803	--------	803
Arkansas	1	--------	--------	10	10	11	--------	11
California	3	--------	9	281	290	293	--------	293
Colorado	9	1	32	445	478	487	--------	487
Florida	--------	--------	2	2	4	4	--------	4
Idaho	7	--------	23	635	658	665	--------	665
Kansas	1	--------	5	36	41	42	--------	42
Michigan	10	--------	20	501	521	531	--------	531
Minnesota	6	--------	22	142	164	170	--------	170
Missouri	2	--------	11	153	164	166	--------	166
Montana	13	--------	8	436	444	457	--------	457
Nevada	4	--------	34	326	360	364	--------	364
New Jersey	1	--------	--------	42	42	43	--------	43
New Mexico	2	1	9	284	294	296	--------	296
New York	5	--------	4	32	36	41	--------	41
North Carolina	2	--------	--------	85	85	87	--------	87
Oklahoma	1	--------	11	29	40	41	--------	41
Oregon	--------	--------	--------	20	20	20	--------	20
South Dakota	1	--------	7	132	139	140	--------	140
Tennessee	1	--------	5	50	55	56	--------	56
Texas	--------	--------	--------	5	5	5	--------	5
Utah	5	2	16	277	295	300	--------	300
Virginia	--------	--------	1	38	39	39	--------	39
Washington	2	--------	4	124	128	130	--------	130
Wisconsin	2	--------	1	121	122	124	--------	124
Wyoming	--------	--------	1	27	28	28	--------	28
Other States [2]	1	--------	1	44	45	46	--------	46
Total	89	5	282	5, 188	5, 475	5, 564	--------	5, 564

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[1] See definitions at end of table 5, p. 14.

[2] Includes Georgia, Illinois, Kentucky, North Dakota, Pennsylvania, and Vermont.

TABLE 22.—*All metal mines: Injuries in the United States and Alaska, by States and severity of injury, 1957*

State	Fatal	Permanent total [1]	Permanent partial [1]	Temporary total [1]	Total nonfatal injuries	Total all injuries	Office-workers	Grand total
Alabama	1	--------	4	29	33	34	--------	34
Alaska	1	--------	2	117	119	120	--------	120
Arizona	7	--------	39	747	786	793	--------	793
Arkansas	--------	--------	2	23	25	25	--------	25
California	4	--------	1	106	107	111	--------	111
Colorado	5	--------	15	477	492	497	--------	497
Florida	--------	--------	1	5	6	6	--------	6
Georgia	--------	--------	--------	--------	--------	--------	--------	--------
Idaho	11	--------	29	528	557	568	--------	568
Illinois	--------	--------	--------	--------	--------	--------	--------	--------
Kansas	--------	--------	2	14	16	16	--------	16
Michigan	11	--------	23	548	571	582	--------	582
Minnesota	5	--------	10	88	98	103	--------	103
Missouri	4	--------	14	94	108	112	1	113
Montana	8	2	12	304	318	326	--------	326
Nevada	3	--------	24	196	220	223	--------	223
New Jersey	--------	--------	--------	38	38	38	--------	38
New Mexico	1	--------	2	249	251	252	--------	252
New York	2	--------	5	50	55	57	--------	57
North Carolina	--------	--------	2	64	66	66	--------	66
Oklahoma	--------	1	3	5	9	9	--------	9
Oregon	--------	--------	--------	19	19	19	--------	19
Pennsylvania	--------	--------	--------	8	8	8	--------	8
South Dakota	1	--------	8	122	130	131	--------	131
Tennessee	1	1	5	67	73	74	--------	74
Texas	--------	--------	--------	1	1	1	--------	1
Utah	4	1	18	257	276	280	1	281
Virginia	1	--------	4	49	53	54	--------	54
Washington	1	--------	1	77	78	79	--------	79
Wisconsin	--------	--------	--------	--------	--------	--------	--------	--------
Wyoming	--------	--------	1	30	31	31	--------	31
Other States [2]	--------	--------	--------	10	10	10	--------	10
Total	71	5	227	4, 322	4, 554	4, 625	2	4, 627

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[1] See definitions at end of table 5, p. 14.

[2] Includes Mississippi, South Carolina, and Vermont.

TABLE 23.—*Injuries at all metal mines in the United States and Alaska, by work location, cause, and State, 1956*

State and location	Fall of rock or ore from back, bank, wall, etc.		Rushes, rolls or slides		Falling materials or objects		Falls of persons		Handling materials		Handtools		Stepping or kneeling on sharp or loose objects		Striking or bumping against objects	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Alabama:																
Underground		10				2		3		1		1		1		
Opencut				1										1		
Alaska:																
Underground		2	1	3								1				
Surface				25		1		9		27		17		1		
Opencut										1		2				
Arizona:																
Underground	3	75		27		51		83		90		47		21		2
Surface				1		3		8		19		4		2		
Opencut		4				7		17		37		6		5		
Arkansas:																
Underground																
Surface										1						
Opencut										4		1		2		
California:																
Underground	1	17		8		3		17		35		12		3		2
Surface				5			1	3		12		2		1		
Opencut		2		3		1		3		11		3		1		
Colorado:																
Underground	5	65		13		18	1	47		66		26		18		3
Surface				1		2		9		16		1		1		1
Opencut																
Florida:																
Opencut								1								
Idaho:																
Underground		84		2		19	1	59	1	167		53		16		5
Shaft and slope		15				3		2		13				1		
Surface						2		5		16		4				
Opencut										1						
Kansas:																
Underground						2		5		8		5		1		
Surface										2						
Michigan:																
Underground	6	33		52		31	2	65		105		26		12		3
Shaft and slope												1				
Surface								2		12		3				2
Opencut								1		1				2		
Minnesota:																
Underground	1	1		7		3		7	1	7				3		
Shaft and slope							1									
Surface						1		2		5		3		1		
Opencut		1				9		19		19		4		7		
Missouri:																
Underground		19		1		10		30		26		6		10		1
Surface						1		3		1						
Opencut	1															
Montana:																
Underground	5	81	1	31		15	2	47		86		20		10		
Shaft and slope								1								
Surface				2				10		26		4		1		
Nevada:																
Underground	2	54		8	1	7		21		35		34		6		3
Surface						1		2		7		2		1		
Opencut						1		4		23		4		4		

Original from THE OHIO STATE UNIVERSITY

State and location	Haulage		Explosives		Electricity		Machinery		Suffocation		Fires		Miscellaneous causes		Total	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Alabama:																
Underground	1	10			1			3		1				1	2	33
Opencut		1														3
Alaska:																
Underground		1													1	7
Surface		1		1				6						37		125
Opencut								1								4
Arizona:																
Underground	2	79	1	10		4		72	1	1				32	7	594
Surface		6						7		1				7		58
Opencut		33				1		23						11		144
Arkansas:																
Underground														1		1
Surface																1
Opencut	1	1													1	8
California:																
Underground		46		2				39		2				10	1	196
Surface		3				1		10		1				7	1	45
Opencut		8		2		1	1	9		3				2	1	49
Colorado:																
Underground	2	88	1	3				65						9	9	421
Surface		8						11						6		56
Opencut								1								1
Florida:																
Opencut								2						1		4
Idaho:																
Underground	1	15		2		1		59	1	3				37	4	522
Shaft and slope		48						11						4		97
Surface	1	4				1		3					1	2	2	37
Opencut	1													1	1	2
Kansas:																
Underground		6			1			10						2	1	39
Surface																2
Michigan:																
Underground		68		11		2		64					2	11	10	483
Shaft and slope		1														2
Surface		5						4				1		1		30
Opencut		1						1								6
Minnesota:																
Underground								2							2	30
Shaft and slope															1	
Surface		1			1			2						1	1	16
Opencut	1	25		1				19					1	14	2	118
Missouri:																
Underground	1	30						19		1				3	1	156
Surface								1								6
Opencut														2	1	2
Montana:																
Underground	4	58		2		1		34						3	12	388
Shaft and slope																1
Surface	1	2						6						4	1	55
Nevada:																
Underground	1	41		4				33						17	4	263
Surface		5		1		1		1						9		30
Opencut		20						9						2		67

See footnote at end of table.

TABLE 23.—*Injuries at all metal mines in the United States and Alaska, by work location, cause, and State, 1956*—Continued

State and location	Fall of rock or ore from back, bank, wall, etc.		Rushes, rolls or slides		Falling materials or objects		Falls of persons		Handling materials		Handtools		Stepping or kneeling on sharp or loose objects		Striking or bumping against objects	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
New Jersey:																
Underground	1	4		1		2		3		8		4		2		1
Surface								2								
New Mexico:																
Underground	1	34		4		12	1	23		38		20		6		1
Surface						1		2		8				1		
Opencut								11		9		4		2		
New York:																
Underground	3	6	1			3		5		10						
Shaft and slope						1										
Surface								2		1						
Opencut		1						3		1		1				
North Carolina:																
Underground	1	9		4		7		7		23		5		5		
Surface						2				7				1		
Oklahoma:																
Underground	1	7				3		3		8		2				
Surface										1						
Oregon:																
Underground		2						1		7						
Shaft and slope		1														
Surface										1						
Opencut										1						
South Dakota:																
Underground		8		4		19		10		15		7		7		1
Surface								8		5		5		1		1
Tennessee:																
Underground		8		2	1	1		8				2		4		
Surface								2								
Texas:																
Underground										1						
Surface																
Opencut										1						
Utah:																
Underground	1	44		4		15		29		36		10		9		2
Surface				1		2	1	4		8						
Opencut	2	3						5		4		1		3		
Virginia:																
Underground				2		1		7		10		4		2		
Surface				1												
Washington:																
Underground	2	13		1		3		17		31		14		3		
Shaft and slope						1						1				
Surface								2		2						
Wisconsin:																
Underground		12	1	13		6		15		20		10		10		
Surface								1		4		1		1		
Wyoming:																
Underground		5		1				3		5						
Surface																
Opencut										1						
Other States:[1]																
Underground		5		2		3		9		8		3				
Shaft and slope																
Surface								1		2						
Opencut																
Total	36	625	4	230	2	275	10	668	2	1, 156		386		189		28

State and location	Haulage		Explosives		Electricity		Machinery		Suffocation		Fires		Miscellaneous causes		Total	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
New Jersey:																
Underground		6		1				4		1				1	1	38
Surface		2														4
New Mexico:																
Underground		31		3				40						7	2	219
Surface		5				1		5						5		28
Opencut		8		1				11						1		47
New York:																
Underground	1	1													5	25
Shaft and slope																1
Surface																3
Opencut								1								7
North Carolina:																
Underground		5		1	1			7						2	2	75
Surface																10
Oklahoma:																
Underground		3		1				10						2	1	39
Surface																1
Oregon:																
Underground								3								13
Shaft and slope		2														3
Surface								1								2
Opencut		1														2
South Dakota:																
Underground		17	1	1				17							1	106
Surface		5						4						4		33
Tennessee:																
Underground		5		2		2		11						2	1	47
Surface		4						1						1		8
Texas:																
Underground		1														2
Surface														1		1
Opencut		1														2
Utah:																
Underground		28		5				46	1	3				7	2	238
Surface		7						3						2	1	27
Opencut		7		1		2		3						1	2	30
Virginia:																
Underground		4						4						2		36
Surface								1						1		3
Washington:																
Underground		4		1				21						3	2	111
Shaft and slope		9														11
Surface		1						1								6
Wisconsin:																
Underground		12		1				8						2	1	109
Surface	1	3		1				1						1	1	13
Wyoming:																
Underground		7						3								24
Surface		1														1
Opencut				2												3
Other States: [1]																
Underground		4	1	2				3							1	39
Shaft and slope		1														1
Surface		1														4
Opencut								1								1
Total	19	801	4	62	4	18	1	737	3	17		1	4	282	89	5,475

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[1] Includes Georgia, Illinois, Kentucky, North Dakota, Pennsylvania, and Vermont.

TABLE 24.—*Injuries at all metal mines in the United States and Alaska, by work location, cause, and State, 1957*

State and location	Fall of rock or ore from back, bank, wall, etc.		Rushes, rolls or slides		Falling materials or objects		Falls of persons		Handling materials		Handtools		Stepping or kneeling on sharp or loose objects		Striking or bumping against objects	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Alabama:																
Undeground		8				3		8		3				1		
Opencut								1		1		1				
Alaska:																
Underground	1			4				2		1						
Surface								11		46		13				
Opencut								1		2						
Arizona:																
Underground	1	85		25	1	99		63		102		76		17		16
Surface						8		11		28		1		3		2
Opencut	1	1				11		9		14		5				1
Arkansas:																
Underground								3		1						
Surface				3				1		3		1				
Opencut		2								6		2				
California:																
Underground		3				9		4		14		9				2
Shaft and slope						1	1	1								
Surface					1	1		7		13		3		1		
Opencut						1				1				1		
Colorado;																
Underground	1	34	1	11	1	48	1	50		75		40		18		8
Surface						4		8		11		3		1		1
Opencut																
Florida:																
Opencut								2				1				
Idaho:																
Underground	6	84		13		17	1	50		175		18		11		4
Surface						1		8	1	16		6				
Opencut										1		1				
Kansas:																
Underground		2						1		2		4		3		
Michigan:																
Underground	5	74	1	45		64		66		79		11		19	1	17
Surface				1		3		8		9		3		1		3
Opencut				1				1								
Minnesota:																
Underground		1	1	3		5		4		9				1		2
Surface						1				3						
Opencut				2		4		13		12		4		4		
Missouri:																
Underground	1	13			1	3		16	1	17		2		4		
Surface								1		2						
Opencut						1						1				
Montana:																
Underground	1	69		7		6	3	36		85		13		1		1
Shaft and slope		5														
Surface							1	12		11		1		1		
Opencut								1								
Nevada:																
Underground		3		1		19	1	7		17		17		1		2
Surface								2		4						
Opencut						5		10		12		7		1		1

Original from THE OHIO STATE UNIVERSITY

State and location	Haulage		Explosives		Electricity		Machinery		Suffocation		Fires		Miscellaneous causes		Total	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Alabama:																
Underground		2				1		2						1		29
Opencut							1							1	1	4
Alaska:																
Underground								1							1	8
Surface		1						15						19		105
Opencut		2												1		6
Arizona:																
Underground	2	60		3	1	2		56						24	5	628
Surface		4		1			1	6						6	1	70
Opencut		11		1		2		20				2		11	1	88
Arkansas:																
Underground																4
Surface																8
Opencut								3								13
California:																
Underground		10						3						9		63
Shaft and slope	1														2	2
Surface						1		2					1	8	2	36
Opencut		1						2								6
Colorado:																
Underground		75		2		1	1	52						27	5	441
Surface		15						5						1		49
Opencut								2								2
Florida:																
Opencut						2		1								6
Idaho:																
Underground	2	68		3		1	1	38		1				22	10	505
Surface		5				1		4						9	1	50
Opencut																2
Kansas:																
Underground								2						2		16
Michigan:																
Underground		53	3	17		4	1	43						36	11	528
Surface		2						1						9		40
Opencut								1								3
Minnesota:																
Underground		3						2							1	30
Surface								1						2		7
Opencut	4	14						2						6	4	61
Missouri:																
Underground	1	18		1		3		14		1				4	3	96
Surface								3						2		8
Opencut													1	2	1	4
Montana:																
Underground		8		2				26						3	4	257
Shaft and slope		23				1	1								2	28
Surface								2						1	1	29
Opencut		3					1								1	4
Nevada:																
Underground		30	1	1				7						17	2	122
Surface		1		1				1						11		20
Opencut		20	1			1		6						15	1	78

See footnotes at end of table.

TABLE 24.—*Injuries at all metal mines in the United States and Alaska, by work location, cause, and State, 1957*—Continued

State and location	Fall of rock or ore fromback, bank, wall, etc.		Rushes, rolls or slides		Falling materials or objects		Falls of persons		Handling materials		Handtools		Stepping or kneeling on sharp or loose objects		Striking or bumping against objects	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
New Jersey:																
Underground		2		1		2		1		9		5		1		1
Surface										1						
New Mexico:																
Underground		17		13	1	26		17		17		19		5		
Surface				1						8		1				
Opencut		1				1		5		7		2		1		
New York:																
Underground	1	11		2		4	1	3		6				1		1
Surface										1						
Opencut								1		3		2				
North Carolina:																
Underground		9		1		7		4		14		1		2		
Surface										5						
Oklahoma:																
Underground								4		1		1				
Surface						1										
Oregon:																
Underground						1		2		6						
Surface								2		1		1				
Opencut										1				1		
Pennsylvania:																
Underground		3						1		1						
Surface																1
South Dakota:																
Underground		5		9		11	1	8		18		12		3		4
Surface						1		4		6		2				
Opencut										1						
Tennessee:																
Underground	1	12				4		11		10		8		4		
Shaft and slope						1										
Surface						1										
Opencut								1								
Texas:																
Opencut																
Utah																
Underground		37	1		1	19		21		41		14		1		2
Surface						1		7		3		1		1		1
Opencut		1				2		4		1		4		2		
Virginia:																
Underground		3		2		4		4		12		3		3		2
Surface																
Opencut				1												
Washington:																
Underground		2				3		9	1	23		5				
Surface								1		2		1				
Opencut														1		
Wyoming:																
Underground		4				4		2		2				1		1
Surface						1		1		2		1				
Opencut						1				1		1				
Other States: [1]																
Underground				1						3						
Opencut												1				
Total	19	491	4	147	6	409	10	531	3	981		328		116	1	73

State and location	Haulage		Explosives		Electricity		Machinery		Suffocation		Fires		Miscellaneous causes		Total	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
New Jersey:																
Underground		6						4						3		35
Surface														2		3
New Mexico:																
Underground		35		1				43						6	1	199
Surface		3						1				1		1		16
Opencut		4				1		8						6		36
New York:																
Underground		4						9						3	2	44
Surface		1														2
Opencut		1						1						1		9
North Carolina:																
Underground		9						10						2		59
Surface								1						1		7
Oklahoma:																
Underground		1												1		8
Surface																1
Oregon:																
Underground		1														10
Surface		1														5
Opencut		1												1		4
Pennsylvania:																
Underground																5
Surface		2														3
South Dakota:																
Underground		18						23							1	111
Surface		1						2						2		18
Opencut																1
Tennessee																
Underground		7		4				4						5	1	69
Shaft and slope																1
Surface								1								2
Opencut																1
Texas:																
Opencut								1								1
Utah:																
Underground		30		3			1	46				1		9	3	224
Surface		5		1										2		22
Opencut	1	7		1		1		5						2	1	30
Virginia:																
Underground	1	2						8		4				2	1	49
Surface								1								1
Opencut														2		3
Washington:																
Underground		10				2		9		1				5	1	69
Surface								2						2		8
Opencut																1
Wyoming:																
Underground		1												3		18
Surface														1		6
Opencut		1						2						1		7
Other States: [1]																
Underground		4												1		9
Opencut																1
Total	12	584	5	42	1	24	8	504		7		4	2	313	71	4, 554

[1] Includes Mississippi, South Ca rolina, and Vermont.

TABLE 25.—*Employment data and injury experience at copper mines, by States, 1956*

State	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	32	3,017	649	3,319	6,985	315	7,300	318	314	326	321	322	322	959,777	204,084	1,081,754	2,245,615	101,517	2,347,132
Idaho	5	252	108		360		360	301	303		302		302	75,864	32,727		108,591		108,591
Michigan	13	1,367	234		1,601	209	1,810	272	266		271	152	257	372,187	62,149		434,336	31,678	466,014
Nevada	28	263	36	870	1,169	128	1,297	323	317	334	331	336	332	84,947	11,426	290,902	387,275	43,023	430,298
New Mexico	8	102	74	791	967	189	1,156	280	316	360	348	362	350	28,575	23,415	284,510	336,500	68,478	404,978
Utah	6	14	2	2,317	2,333	308	2,641	146	124	362	360	288	352	2,041	248	838,651	840,940	88,837	929,777
Washington	3	104	23		127	15	142	294	239		284	295	286	30,612	5,507		36,119	4,426	40,545
Other States [1]	36	3,390	1,187	28	4,605	154	4,759	296	301	162	297	358	299	1,004,868	356,791	4,546	1,366,205	55,196	1,421,401
Total	131	8,509	2,313	7,325	18,147	1,318	19,465	301	301	341	317	298	316	2,558,871	696,347	2,500,363	5,755,581	393,155	6,148,736

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	5,471.37			2,345.55	2,243.78	3,387.69	2,766.54	1,193.48	2,277.53	2,178.71	7,676,328	1,632,364	8,597,545	17,906,237	812,138	18,718,375
Idaho		22,916.51		6,906.66	6,906.66	771.12	271.18		620.45	620.45	606,907	261,820		868,727		868,727
Michigan	10,075.58			8,633.87	8,046.97	1,791.77	6,371.82		2,447.13	2,280.78	2,977,497	497,189		3,474,686	253,425	3,728,111
Nevada	8,829.01			1,936.45	1,742.85	6,593.80		905.28	2,126.22	1,913.65	679,578	91,408	2,327,465	3,098,451	344,185	3,442,636
New Mexico						28,829.80	144.14	160.80	2,595.02	2,156.24	228,687	187,317	2,276,076	2,692,080	547,821	3,239,901
Utah			1,788.59	1,783.72	1,613.29			1,142.91	1,139.80	1,030.89	16,326	1,984	6,709,208	6,727,518	710,696	7,438,214
Washington	24,612.46			21,153.95	18,806.24	2,358.69	100.36		2,041.36	1,814.80	243,779	39,856		283,635	35,408	319,043
Other States [1]	7,463.67	2,102.06		6,038.62	5,804.12	1,675.22	390.63	1,237.35	1,338.29	1,286.32	8,038,942	2,854,347	36,368	10,929,657	441,574	11,371,231
Total	7,035.36	2,155.84	601.60	3,653.68	3,419.76	2,781.12	1,599.09	1,025.08	1,876.25	1,756.13	20,468,044	5,566,285	19,946,662	45,980,991	3,145,247	49,126,238

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers
Arizona	7			7	7	466	42	128	636	636	.91			.39	.37	60.71	25.73	14.89	35.52	33.98
Idaho		1		1	1	53	5		58	58		3.82		1.15	1.15	87.33	19.10		66.76	66.76
Michigan	5			5	5	200	10		210	210	1.68			1.44	1.34	67.17	20.11		60.44	56.33
Nevada	1			1	1	11		41	52	52	1.47			.32	.29	16.19		17.62	16.78	15.10
New Mexico						85	5	28	118	118						371.69	26.69	12.30	43.83	36.42
Utah			2	2	2			21	21	21			.30	.30	.27			3.13	3.12	2.82
Washington	1			1	1	55	1		56	56	4.10			3.53	3.13	225.61	25.09		197.44	175.52
Other States [1]	10	1		11	11	266	44	2	312	312	1.24	.35		1.01	.97	33.09	15.42	54.99	28.55	27.44
Total	24	2	2	28	28	1,136	107	220	1,463	1,463	1.17	.36	.10	.61	.57	55.50	19.22	11.03	31.82	29.78

[1] Includes California, Montana, North Carolina, Tennessee, and Vermont.

TABLE 26.—*Employment data and injury experience at copper mines, by States, 1957*

State	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	55	3,152	839	3,219	7,210	266	7,476	312	305	290	301	296	301	984,352	255,770	931,982	2,172,104	78,865	2,250,969
Idaho	7	300	101	--------	401	9	410	269	272	--------	270	260	270	80,836	27,513	--------	108,349	2,340	110,689
Michigan	14	1,335	215	--------	1,550	18	1,568	262	261	--------	261	255	261	349,128	56,157	--------	405,285	4,590	409,875
Nevada	26	231	33	778	1,042	160	1,202	318	338	336	332	279	325	73,504	11,161	261,132	345,797	44,719	390,516
New Mexico	16	105	84	732	921	5	926	245	279	342	326	314	326	25,740	23,476	250,654	299,870	1,570	301,440
Utah	9	18	3	2,225	2,246	54	2,300	92	100	350	347	335	347	1,652	301	778,030	779,983	18,087	798,070
Other States [1]	54	2,815	1,372	107	4,294	70	4,364	242	265	285	251	259	251	682,102	363,571	30,451	1,076,124	18,096	1,094,220
Total	181	7,956	2,647	7,061	17,664	582	18,246	276	279	319	294	289	294	2,197,314	737,949	2,252,249	5,187,512	168,267	5,355,779

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	1,523.54	--------	808.88	1,037.96	1,001.60	2,255.86	754.53	439.76	1,301.78	1,256.18	7,876,388	2,047,642	7,417,654	17,341,684	629,524	17,971,208
Idaho	27,816.71	--------	--------	20,756.60	20,318.00	1,103.40	1,462.96	--------	1,194.66	1,169.41	647,093	220,101	--------	867,194	18,720	885,914
Michigan	12,889.07	--------	--------	11,103.32	10,978.98	5,487.16	4,196.26	--------	5,308.31	5,248.87	2,793,064	449,210	--------	3,242,274	36,720	3,278,994
Nevada	10,248.35	--------	--------	2,170.90	1,922.47	4,919.21	--------	864.97	1,695.84	1,501.77	585,460	89,287	2,089,083	2,763,830	357,151	3,120,981
New Mexico	--------	--------	--------	--------	--------	3,145.84	138.44	73.29	342.16	340.37	205,986	187,810	2,005,695	2,399,491	12,559	2,412,050
Utah	--------	--------	963.97	961.56	939.77	--------	--------	918.67	916.37	895.60	13,252	2,368	6,224,238	6,239,858	144,696	6,384,554
Other States [1]	4,398.94	--------	24,633.58	3,489.19	3,431.41	3,103.27	1,512.82	554.26	2,494.89	2,453.57	5,455,858	2,898,562	243,570	8,597,990	144,767	8,742,757
Total	5,461.65	--------	1,001.10	2,750.15	2,663.77	3,087.37	1,384.74	615.62	1,773.10	1,717.41	17,577,101	5,894,980	17,980,240	41,452,321	1,344,137	42,796,458

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers
Arizona	2	--------	1	3	3	512	53	73	638	638	0.25	--------	0.13	0.17	0.17	65.00	25.88	9.84	36.79	35.50
Idaho	3	--------	--------	3	3	36	7	--------	43	43	4.64	--------	--------	3.46	3.39	55.63	31.80	--------	49.59	48.54
Michigan	6	--------	--------	6	6	186	4	--------	190	190	2.15	--------	--------	1.85	1.83	66.59	8.90	--------	58.60	57.94
Nevada	1	--------	--------	1	1	7	--------	54	61	61	1.71	--------	--------	.36	.32	11.96	--------	25.85	22.07	19.55
New Mexico	--------	--------	--------	--------	--------	73	4	18	95	95	--------	--------	--------	--------	--------	354.39	21.30	8.97	39.59	39.39
Utah	--------	--------	1	1	1	--------	--------	24	24	24	--------	--------	.16	.16	.16	--------	--------	3.86	3.85	3.76
Other States [1]	4	--------	1	5	5	191	31	3	225	225	.73	--------	4.11	.58	.57	35.01	10.69	12.32	26.17	25.74
Total	16	--------	3	19	19	1,005	99	172	1,276	1,276	.91	--------	.17	.46	.44	57.18	16.79	9.57	30.78	29.82

[1] Includes California, Colorado, Montana, North Carolina, Oregon, Tennessee, Vermont and Washington.

TABLE 27.—*Employment data and injury experience at iron mines, by States, 1956*

State	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total
Alabama	19	2,434	508	268	3,210	47	3,257	169	170	241	175	219	176	410,627	86,361	64,596	561,584	10,316	571,900
California	3	--------	--------	154	154	23	177	--------	--------	227	227	230	227	--------	--------	34,943	34,943	5,299	40,242
Michigan	36	5,095	1,593	221	6,909	84	6,993	233	240	199	234	244	234	1,189,509	382,766	44,085	1,616,360	20,514	1,636,874
Minnesota	133	1,186	1,723	9,064	11,973	495	12,468	227	245	255	251	274	252	268,843	422,993	2,310,567	3,002,403	135,574	3,137,977
Missouri	14	77	50	93	220	6	226	206	206	140	178	291	181	15,830	10,284	12,976	39,090	1,745	40,835
Nevada	8	--------	--------	111	111	--------	111	--------	--------	245	245	--------	245	--------	--------	27,193	27,193	--------	27,193
New Jersey	3	398	113	--------	511	16	527	242	262	--------	247	239	246	96,430	29,588	--------	126,018	3,828	129,846
New York	6	610	135	347	1,092	131	1,223	231	231	299	253	247	252	140,898	31,138	103,745	275,781	32,329	308,110
Texas	4	--------	74	133	207	6	213	--------	236	239	238	269	239	--------	17,463	31,838	49,301	1,615	50,916
Utah	6	--------	--------	347	347	108	455	--------	--------	224	224	247	229	--------	--------	77,640	77,640	26,717	104,357
Wisconsin	3	857	283	24	1,164	17	1,181	230	230	149	229	248	229	197,534	65,108	3,564	266,206	4,215	270,421
Other States [1]	14	640	227	52	919	20	939	229	228	131	223	218	223	146,278	51,850	6,806	204,934	4,352	209,286
Total	249	11,297	4,706	10,814	26,817	953	27,770	218	233	251	234	259	235	2,465,949	1,097,551	2,717,953	6,281,453	246,504	6,527,957

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total	Office-workers	Grand total
Alabama	3,652.85	--------	--------	2,611.31	2,561.61	1,592.04	--------	79.11	1,148.76	1,126.90	3,285,102	690,885	619,403	4,595,390	89,160	4,684.550
California	--------	--------	--------	--------	--------	--------	--------	318.38	318.38	276.46	--------	--------	279,537	279,537	42,394	321,931
Michigan	3,152.56	--------	--------	2,320.03	2,290.96	1,300.96	578.69	309.07	1,102.87	1,089.05	9,516,070	3,062,106	352,676	12,930,852	164,099	13,094,951
Minnesota	8,369.20	1,773.08	649.05	1,498.55	1,433.81	546.32	310.59	787.78	698.95	668.75	2,150,744	3,383,933	18,488,569	24,023,246	1,084,712	25,107,958
Missouri	--------	--------	57,802.91	19,187.11	18,367.38	24,178.77	413.28	539.49	10,079.63	9,649.00	126,640	82,269	103,801	312,710	13,956	326,666
Nevada	--------	--------	--------	--------	--------	--------	--------	2,024.57	2,024.57	2,024.57	--------	--------	230,666	230,666	--------	230,666
New Jersey	7,777.66	--------	--------	5,951.51	5,776.06	890.54	367.54	--------	767.75	745.11	771,440	236,707	--------	1,008,147	30,624	1,038,771
New York	15,969.10	--------	--------	8,158.64	7,308.26	1,124.05	401.44	516.89	814.05	729.20	1,127,177	249,106	829,968	2,206,251	256,716	2,462,967
Texas	--------	--------	--------	--------	--------	--------	--------	362.00	234.49	226.69	--------	139,706	256,906	396,612	13,648	410,260
Utah	--------	--------	--------	--------	--------	--------	--------	83.72	83.72	62.29	--------	--------	621,117	621,117	213,732	834,849
Wisconsin	3,796.81	--------	--------	2,817.35	2,773.44	2,172.41	405.09	--------	1,711.07	1,684.40	1,580,276	520,867	28,515	2,129,658	33,719	2,163,377
Other States [1]	--------	--------	--------	--------	--------	1,001.67	47.99	--------	727.73	712.62	1,173,046	416,718	52,328	1,642,092	34,816	1,676,908
Total	4,561.47	683.19	823.29	2,262.97	2,177.49	1,439.85	372.91	727.65	944.75	909.06	19,730,495	8,782,297	21,863,486	50,376,278	1,977,576	52,353,854

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Under-ground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers
Alabama	2	--------	--------	2	2	33	--------	3	36	36	.61	--------	--------	.44	.43	10.05	--------	4.84	7.83	7.68
California	--------	--------	--------	--------	--------	--------	--------	2	2	2	--------	--------	--------	--------	--------	--------	--------	7.15	7.15	6.21
Michigan	5	--------	--------	5	5	285	20	6	311	311	.53	--------	--------	.39	.38	29.95	6.53	17.01	24.05	23.75
Minnesota	3	1	2	6	6	30	16	118	164	164	1.39	.30	.11	.25	.24	13.95	4.73	6.38	6.83	6.53
Missouri	--------	--------	1	1	1	2	1	2	5	5	--------	--------	9.63	3.20	3.06	15.79	12.16	19.27	15.99	15.31
Nevada	--------	--------	--------	--------	--------	--------	--------	17	17	17	--------	--------	--------	--------	--------	--------	--------	73.70	73.70	73.70
New Jersey	1	--------	--------	1	1	32	3	--------	35	35	1.30	--------	--------	.99	.96	41.48	12.67	--------	34.72	33.69
New York	3	--------	--------	3	3	13	1	7	21	21	2.66	--------	--------	1.36	1.22	11.53	4.01	8.43	9.52	8.53
Texas	--------	--------	--------	--------	--------	--------	--------	2	2	2	--------	--------	--------	--------	--------	--------	--------	7.78	5.04	4.87
Utah	--------	--------	--------	--------	--------	--------	--------	7	7	7	--------	--------	--------	--------	--------	--------	--------	11.27	11.27	8.38
Wisconsin	1	--------	--------	1	1	83	5	--------	88	88	.63	--------	--------	.47	.46	52.52	9.60	--------	41.32	40.68
Other States [1]	--------	--------	--------	--------	--------	34	1	--------	35	35	--------	--------	--------	--------	--------	28.98	2.40	--------	21.31	20.87
Total	15	1	3	19	19	512	47	164	723	723	.76	.11	.14	.38	.36	25.95	5.35	7.50	14.35	13.81

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[1] Includes Arkansas, Colorado, Georgia, Kentucky, Montana, New Mexico, Pennsylvania, Washington and Wyoming.

TABLE 28.—*Employment data and injury experience at iron mines, by States and Alaska, 1957*

State	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total
Alabama	25	2,020	381	199	2,600	45	2,645	203	211	237	207	230	208	410,993	80,501	47,142	538,636	10,332	548,968
California	6	3	2	165	170	8	178	75	60	195	192	260	195	225	120	32,217	32,562	2,082	34,644
Georgia	13			117	117	1	118			189	189	300	190			22,095	22,095	300	22,395
Michigan	38	5,038	1,692	214	6,944	110	7,054	241	243	210	241	260	241	1,216,483	411,587	45,013	1,673,083	28,635	1,701,718
Minnesota	177	1,367	1,579	8,898	11,844	722	12,566	242	289	270	270	252	269	331,432	456,931	2,406,051	3,194,414	181,603	3,376,017
Missouri	25	121	47	205	373	7	380	181	182	86	129	223	131	21,945	8,554	17,687	48,186	1,560	49,746
Nevada	9			144	144	6	150			269	269	184	265			38,715	38,715	1,105	39,820
New York	8	238	117	400	755	155	910	525	233	306	364	265	347	124,905	27,281	122,393	274,579	41,098	315,677
Texas	3		4	43	47	3	50		281	274	275	308	277		1,123	11,781	12,904	925	13,829
Utah	10			357	357	97	454			238	238	254	241			84,805	84,805	24,622	109,427
Wisconsin	3	820	277	22	1,119	18	1,137	253	252	133	250	246	250	207,414	69,831	2,915	280,160	4,435	284,595
Other States [1]	19	930	192	77	1,199	30	1,229	237	248	159	233	262	234	220,021	47,540	12,270	279,831	7,845	287,676
Total	336	10,537	4,291	10,841	25,669	1,202	26,871	240	257	262	252	253	252	2,533,418	1,103,468	2,843,084	6,479,970	304,542	6,784,512

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total	Office-workers	Grand total
Alabama			13,611.12	1,372.13	1,345.76	962.30		372.04	761.07	746.45	3,287,947	644,002	440,816	4,372,765	85,691	4,458,456
California								100.88	99.81	93.81	1,800	960	257,740	260,500	16,658	277,158
Georgia													187,890	187,890	3,300	191,190
Michigan	3,082.66			2,241.33	2,203.61	1,837.16	242.03	1,199.75	1,427.58	1,403.55	9,731,862	3,292,991	360,074	13,384,927	229,086	13,614,013
Minnesota	2,262.91		1,246.12	1,173.40	1,110.28	665.67	51.98	355.71	344.43	325.91	2,651,456	3,655,439	19,259,819	25,566,714	1,453,428	27,020,142
Missouri			38,600.35	15,021.33	14,566.22	2,494.86		160.83	1,159.15	1,124.03	175,561	68,432	155,439	399,432	12,480	411,912
Nevada								493.92	493.92	480.71			321,917	321,917	8,842	330,759
New York	6,004.58			2,731.46	2,375.86	970.74	3,436.47	185.88	865.87	753.15	999,238	218,247	979,139	2,196,624	328,781	2,525,405
Texas												8,984	99,918	108,902	8,125	117,027
Utah								73.70	73.70	57.12			678,448	678,448	196,972	875,420
Wisconsin											1,659,311	558,648	23,322	2,241,281	35,480	2,276,761
Other States [1]						426.66	163.02	570.81	388.19	377.60	1,760,173	380,321	98,107	2,238,601	62,763	2,301,364
Total	2,072.30		1,574.62	1,501.21	1,433.83	1,231.88	203.78	347.51	668.06	638.07	20,267,348	8,828,024	22,862,629	51,958,001	2,441,606	54,399,607

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Under-ground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers
Alabama	-------	-------	1	1	1	29	-------	4	33	33	-------	-------	2.27	0.23	0.22	8.82	-------	9.07	7.55	7.40
California	-------	-------	-------	-------	-------	-------	-------	4	4	4	-------	-------	-------	-------	-------	-------	-------	15.52	15.36	14.43
Georgia	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Michigan	5	-------	-------	5	5	342	36	3	381	381	0.51	-------	-------	.37	.37	35.14	10.93	8.33	28.46	27.99
Minnesota	1	-------	4	5	5	30	7	61	98	98	.38	-------	.21	.20	.19	11.31	1.91	3.17	3.83	3.63
Missouri	-------	-------	1	1	1	3	-------	4	7	7	-------	-------	6.43	2.50	2.43	17.09	-------	25.73	17.52	16.99
Nevada	-------	-------	-------	-------	-------	-------	-------	13	13	13	-------	-------	-------	-------	-------	-------	-------	40.38	40.38	39.30
New York	1	-------	-------	1	1	15	1	9	25	25	1.00	-------	-------	.46	.40	15.01	4.58	9.19	11.38	9.90
Texas	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Utah	-------	-------	-------	-------	-------	-------	-------	1	1	1	-------	-------	-------	-------	-------	-------	-------	1.47	1.47	1.14
Wisconsin	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Other States[1]	-------	-------	-------	-------	-------	43	9	3	55	55	-------	-------	-------	-------	-------	24.43	23.66	30.58	24.57	23.90
Total	7	-------	6	13	13	462	53	102	617	617	.35	-------	.26	.25	.24	22.80	6.00	4.46	11.87	11.34

[1] Includes Arkansas, Colorado, Idaho, Mississippi, Montana, New Jersey, New Mexico, Oregon, Pennsylvania, Tennessee, Washington, Wyoming, and Alaska. Officeworker data for Delaware also included.

TABLE 29.—*Employment data and injury experience at lead-zinc mines, by States, 1956*

State	Active mines	Men employed						Average days active						Man-days worked					
		Under-ground	Surface	Open-cut	Total	Office-workers	Grand total	Under-ground	Surface	Open-cut	Total	Office-workers	Grand total	Under-ground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	11	386	86	-------	472	25	497	303	303	-------	303	311	303	116,903	26,050	-------	142,953	7,764	150,717
California	7	175	31	5	211	-------	211	299	300	30	292	-------	292	52,259	9,288	150	61,697	-------	61,697
Colorado	30	864	215	-------	1,079	39	1,118	259	256	-------	259	264	259	223,906	55,121	-------	279,027	10,281	289,308
Idaho	22	1,189	245	2	1,436	77	1,513	276	250	92	271	283	272	327,715	61,329	183	389,227	21,828	411,055
Kansas	21	301	35	3	339	1	340	280	283	130	279	308	279	84,269	9,906	390	94,565	308	94,873
Missouri	3	1,605	258	-------	1,863	583	2,446	255	255	-------	255	255	255	409,052	65,864	-------	474,916	148,655	623,571
Montana	12	1,168	144	-------	1,312	156	1,468	285	287	-------	285	365	294	332,934	41,283	-------	374,217	56,890	431,107
Nevada	32	202	47	4	253	14	267	273	287	25	271	293	273	55,060	13,508	100	68,668	4,104	72,772
New Mexico	12	354	71	4	429	13	442	290	287	69	287	255	286	102,621	20,400	276	123,297	3,321	126,618
Oklahoma	29	392	36	-------	428	7	435	269	270	-------	269	307	270	105,443	9,737	-------	115,180	2,148	117,328
Tennessee	8	515	61	-------	576	18	594	254	247	-------	253	224	252	130,759	15,072	-------	145,831	4,032	149,863
Utah	15	1,109	189	3	1,301	22	1,323	285	287	260	285	266	285	315,760	54,198	780	370,738	5,853	376,591
Washington	6	246	96	3	345	10	355	298	69	170	234	321	236	73,391	6,667	510	80,568	3,210	83,778
Wisconsin	8	150	59	-------	209	3	212	305	301	-------	304	308	304	45,675	17,762	-------	63,437	924	64,361
Other States [1]	6	682	106	-------	788	108	896	234	215	-------	232	179	225	159,844	22,817	-------	182,661	19,333	201,994
Total	222	9,338	1,679	24	11,041	1,076	12,117	272	256	100	269	268	269	2,535,591	429,002	2,389	2,966,982	288,651	3,255,633

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Under-ground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	-------	-------	-------	-------	-------	2,793.35	1,669.85	-------	2,588.65	2,455.34	935,436	208,402	-------	1,143,838	62,107	1,205,945
California	14,351.46	-------	-------	12,156.08	12,156.08	6,135.25	269.16	-------	5,237.25	5,237.25	418,076	74,304	1,200	493,580	-------	493,580
Colorado	16,759.31	-------	-------	13,446.56	12,971.62	4,144.58	1,938.76	-------	3,708.56	3,577.57	1,790,050	441,004	-------	2,231,054	81,687	2,312,741
Idaho	4,576.97	-------	-------	3,854.03	3,649.36	3,981.96	93.81	-------	3,367.78	3,188.93	2,621.823	490,343	1,460	3,113,626	174,624	3,288,250
Kansas	8,929.08	-------	-------	7,958.43	7,932.50	4,769.61	405.91	-------	4,293.57	4,279.58	671,962	78,836	3,120	753,918	2,464	756,382
Missouri	1,833.51	-------	-------	1,579.22	1,202.75	2,418.09	330.22	-------	2,128.53	1,621.10	3,272,418	526,921	-------	3,799,339	1,189,240	4,988,579
Montana	6,759.67	-------	-------	6,013.80	5,220.06	1,382.73	345.18	-------	1,268.24	1,100.85	2,662.851	330,264	-------	2,993,115	455,120	3,448,235
Nevada	27,426.69	-------	-------	21,962.05	20,717.09	2,463.83	2,877.84	-------	2,542.11	2,398.00	437,530	108,067	800	546,397	32,835	579,232
New Mexico	7,308.44	-------	-------	6,086.24	5,932.60	3,741.92	454.60	-------	3,191.22	3,110.66	820,969	162,779	2,082	985,830	25,531	1,011,361
Oklahoma	7,129.51	-------	-------	6,529.77	6,409.90	10,599.21	517.49	-------	9,751.13	9,572.12	841,572	77,296	-------	918,868	17,184	936,052
Tennessee	5,735.68	-------	-------	5,142.89	5,004.54	1,379.43	4,063.83	-------	1,656.87	1,612.30	1,046,084	120,576	-------	1,166,660	32,251	1,198,911
Utah	4,750.63	-------	-------	4,046.12	3,983.23	4,688.87	237.55	-------	4,028.25	3,965.64	2,525,980	433,584	6,240	2,965,804	46,824	3,012,628
Washington	-------	42,224.38	-------	11,822.71	11,652.97	3,658.52	13,558.81	-------	4,451.31	4,280.65	587,122	53,102	4,080	644,304	25,688	669,992
Wisconsin	-------	-------	-------	-------	-------	1,663.93	2,301.23	-------	1,842.37	1,815.92	365,400	142,098	-------	507,498	7,392	514,890
Other States [1]	9,239.60	-------	-------	8,101.02	7,335.11	1,174.97	504.01	-------	1,092.29	989.02	1,298,758	182,537	-------	1,481,295	154,672	1,635,967
Total	6,503.73	1,749.21	-------	5,811.72	5,296.95	3,373.86	1,092.09	-------	3,041.55	2,772.15	20,296,031	3,430,113	18,982	23,745,126	2,307,619	26,052,745

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers
Arizona	------	------	------	------	------	101	10	------	111	111	------	------	------	------	------	107.97	47.98	------	97.04	92.04
California	1	------	------	1	1	40	4	------	44	44	2.39	------	------	2.03	2.03	95.68	53.83	------	89.14	89.14
Colorado	5	------	------	5	5	207	19	------	226	226	2.79	------	------	2.24	2.16	115.64	43.08	------	101.30	97.72
Idaho	2	------	------	2	2	315	13	------	328	328	.76	------	------	.64	.61	120.15	26.51	------	105.34	99.75
Kansas	1	------	------	1	1	39	2	------	41	41	1.49	------	------	1.33	1.32	58.04	25.37	------	54.38	54.21
Missouri	1	------	------	1	1	154	5	------	159	159	.31	------	------	.26	.20	47.06	9.49	------	41.85	31.87
Montana	3	------	------	3	3	99	5	------	104	104	1.13	------	------	1.00	.87	37.18	15.14	------	34.75	30.16
Nevada	2	------	------	2	2	37	7	------	44	44	4.57	------	------	3.66	3.45	84.57	64.77	------	80.53	75.96
New Mexico	1	------	------	1	1	93	13	------	106	106	1.22	------	------	1.01	.99	113.28	79.86	------	107.52	104.81
Oklahoma	1	------	------	1	1	39	1	------	40	40	1.19	------	------	1.09	1.07	46.31	12.94	------	43.53	42.73
Tennessee	1	------	------	1	1	43	8	------	51	51	.96	------	------	.86	.83	41.11	36.35	------	43.71	42.54
Utah	2	------	------	2	2	140	7	------	147	147	.79	------	------	.67	.65	55.42	16.14	------	49.56	48.79
Washington	------	------	------	------	------	43	2	------	45	45	------	------	------	------	------	73.24	37.66	------	69.84	67.16
Wisconsin	------	1	------	1	1	26	8	------	34	34	------	7.04	------	1.97	1.94	71.15	56.30	------	67.90	66.03
Other States [1]	2	------	------	2	2	62	6	------	68	68	1.54	------	------	1.37	1.22	47.74	32.87	------	47.91	41.57
Total	22	1	------	23	23	1,438	110	------	1,548	1,548	1.08	.29	------	.97	.88	70.85	32.07	------	65.19	59.42

[1] Includes Illinois, New Jersey, New York, and Virginia.

Table 30.—*Employment data and injury experience at lead-zinc mines, by States, 1957*

State	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Surface	Open-cut	Total	Office-workers	Grand total	Underground	Surface	Open-cut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	16	350	95	1	446	19	465	266	279	75	269	276	269	93,198	26,552	75	119,825	5,252	125,077
California	10	192	46	4	242	72	314	113	110	15	111	107	110	21,687	5,067	60	26,814	7,731	34,545
Colorado	39	961	246	2	1,209	48	1,257	245	240	45	244	258	245	235,887	59,161	90	295,138	12,374	307,512
Idaho	44	1,597	471	4	2,072	84	2,156	277	255	233	272	272	272	441,996	120,041	933	562,970	22,868	585,838
Illinois	4	50	27	--------	77	19	96	277	290	--------	281	254	276	13,826	7,826	--------	21,652	4,835	26,487
Kansas	12	198	26	--------	224	--------	224	231	219	--------	229	--------	229	45,692	5,681	--------	51,373	--------	51,373
Missouri	11	1,804	241	--------	2,045	340	2,385	255	255	--------	255	255	255	460,064	61,448	--------	521,512	86,763	608,275
Montana	35	1,298	172	2	1,472	13	1,485	219	194	50	216	260	216	284,554	33,394	100	318,048	3,381	321,429
Nevada	21	188	36	--------	224	6	230	209	249	--------	215	342	219	39,266	8,968	--------	48,234	2,050	50,284
New Mexico	18	287	54	6	347	15	362	219	210	275	218	279	221	62,739	11,340	1,648	75,727	4,185	79,912
Oklahoma	35	333	40	2	375	8	383	142	134	10	140	197	141	47,212	5,356	20	52,588	1,576	54,164
Tennessee	8	554	102	--------	656	20	676	251	215	--------	245	230	245	139,074	21,902	--------	160,976	4,607	165,583
Utah	26	1,005	179	5	1,189	17	1,206	269	268	200	268	257	268	270,055	48,017	1,000	319,072	4,372	323,444
Washington	8	186	49	24	259	10	269	314	302	178	299	298	299	58,357	14,796	4,268	77,421	2,982	80,403
Wisconsin	16	157	62	--------	219	14	233	248	270	--------	255	276	256	38,993	16,747	--------	55,740	3,866	59,606
Other States ¹	5	642	79	--------	721	84	805	264	263	--------	264	261	264	169,509	20,747	--------	190,256	21,883	212,139
Total	308	9,802	1,925	50	11,777	769	12,546	247	243	164	246	245	246	2,422,109	467,043	8,194	2,897,346	188,725	3,086,071

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	16,094.74	--------	--------	12,518.29	11,992.66	6,452.65	409.58	--------	5,109.55	4,895.00	745,585	212,412	600	958,597	42,015	1,000,612
California	--------	--------	--------	--------	--------	121.04	--------	--------	97.90	75.99	173,494	40,535	480	214,509	61,847	276,356
Colorado	3,180.07	--------	--------	2,541.67	2,439.38	3,439.25	407.87	--------	2,830.57	2,716.65	1,886,748	473,189	720	2,360,657	98,988	2,459,645
Idaho	5,089.94	--------	--------	3,996.30	3,841.10	6,963.61	5,320.10	--------	6,601.66	6,345.29	3,536,386	960,320	7,464	4,504,170	181,984	4,686,154
Illinois	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	110,608	62,608	--------	173,216	37,676	210,892
Kansas	--------	--------	--------	--------	--------	986.50	--------	--------	878.38	878.38	365,939	45,046	--------	410,985	--------	410,985
Missouri	4,890.62	--------	--------	4,314.38	3,698.98	2,747.72	268.52	--------	2,455.60	2,111.91	3,680,512	491,585	--------	4,172,097	694,104	4,866,201
Montana	--------	22,458.79	--------	2,357.44	2,332.65	6,599.38	1,238.98	--------	6,034.64	5,971.19	2,277,182	267,156	800	2,545,138	27,045	2,572,183
Nevada	--------	--------	--------	--------	--------	2,576.23	1,800.29	--------	2,431.71	2,330.78	308,202	70,544	--------	378,746	16,400	395,146
New Mexico	--------	--------	--------	--------	--------	2,769.84	549.38	2,047.94	2,405.90	2,281.02	505,083	96,472	13,184	614,739	33,656	648,395
Oklahoma	--------	--------	--------	--------	--------	20,047.39	703.27	--------	18,003.48	17,465.22	375,161	42,658	1,600	419,419	12,926	432,345
Tennessee	5,394.20	--------	--------	4,660.11	4,530.44	8,852.78	--------	--------	7,648.02	7,435.21	1,112,306	175,217	--------	1,287,523	36,852	1,324,375
Utah	--------	--------	--------	--------	--------	5,026.21	479.00	--------	4,325.77	4,276.94	2,159,084	384,136	8,000	2,551,220	34,976	2,586,196
Washington	12,850.03	--------	--------	9,686.20	9,327.01	1,747.60	12,815.64	439.34	3,790.53	3,649.97	466,925	118,371	34,142	619,438	23,855	643,293
Wisconsin	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	311,939	133,981	--------	445,920	30,928	476,848
Other States ¹	8,914.79	--------	--------	7,936.23	7,112.73	4,097.83	1,012.19	--------	3,759.13	3,369.06	1,346,077	165,976	--------	1,512,053	175,062	1,687,115
Total	4,028.67	1,604.19	--------	3,625.62	3,404.02	5,071.68	2,120.47	626.96	4,582.40	4,304.62	19,361,231	3,740,206	66,990	23,168,427	1,508,314	24,676,741

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Under-ground	Sur-face	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Sur-face	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Sur-face	Open-cut	Total, excluding office-workers	Total, including office-workers	Under-ground	Sur-face	Open-cut	Total, excluding office-workers	Total, including office-workers
Arizona	2			2	2	82	4		86	86	2.68			2.09	2.00	109.98	18.83		89.71	85.95
California						5			5	5						28.82			23.31	18.09
Colorado	1			1	1	232	19		251	251	.53			.42	.41	122.96	40.15		106.33	102.05
Idaho	3			3	3	326	17		343	343	.85			.67	.64	92.18	17.70		76.15	73.19
Illinois																				
Kansas						16			16	16						43.72			38.93	38.93
Missouri	3			3	3	93	8		101	102	.82			.72	.62	25.27	16.27		24.21	20.96
Montana		1		1	1	48	4		52	52		3.74		.39	.39	21.08	14.97		20.43	20.22
Nevada						20	3		23	23						64.89	42.53		60.73	58.21
New Mexico						87	6	4	97	97						172.25	62.19	362.40	157.79	149.60
Oklahoma						8	1		9	9						21.32	23.44		21.46	20.82
Tennessee	1			1	1	65			65	65	.90			.78	.76	58.44			56.48	49.08
Utah						104	9		113	114						48.17	23.43		44.29	44.08
Washington	1			1	1	58	4	1	63	63	2.14			1.61	1.55	124.22	33.79	29.29	101.71	97.93
Wisconsin																				
Other States[1]	2			2	2	92	4		96	96	1.49			1.32	1.19	68.35	24.10		33.49	56.90
Total	13	1		14	14	1,236	79	5	1,320	1,322	.67	.27		.60	.57	63.84	21.12	74.64	56.97	53.57

[1] Includes New Jersey, New York, and Virginia.

TABLE 31.—*Employment data and injury experience at gold-silver lode mines, by States and Alaska, 1956*

State	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	5	31	10	3	44	--------	44	277	290	100	268	--------	268	8,588	2,904	300	11,792	--------	11,792
California	54	309	99	17	425	11	436	179	187	115	178	202	179	55,224	18,508	1,950	75,682	2,218	77,900
Colorado	12	109	43	--------	152	6	158	274	277	--------	275	293	275	29,828	11,924	--------	41,752	1,756	43,508
Idaho	14	515	146	--------	661	3	664	255	268	--------	258	319	258	131,282	39,074	--------	170,356	956	171,312
Nevada	28	61	7	13	81	1	82	133	186	54	125	22	124	8,123	1,305	703	10,131	22	10,153
South Dakota	3	883	185	2	1,070	3	1,073	307	307	151	307	309	307	270,959	56,870	301	328,130	927	329,057
Utah	8	43	8	--------	51	7	58	246	218	--------	242	249	243	10,597	1,743	--------	12,340	1,740	14,080
Other States [1]	29	109	23	15	147	3	150	217	259	127	215	197	214	23,678	5,954	1,903	31,535	592	32,127
Total	153	2,060	521	50	2,631	34	2,665	261	265	103	259	242	259	538,279	138,282	5,157	681,718	8,211	689,929

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	--------	--------	--------	--------	--------	12,790.38	1,274.10	12,500.00	9,911.58	9,911.58	68,489	23,546	2,400	94,435	--------	94,435
California	--------	--------	--------	--------	--------	187.97	12,369.42	2,210.66	3,222.46	3,130.56	441,560	148,188	15,380	605,128	17,764	622,892
Colorado	--------	--------	--------	--------	--------	1,039.31	335.46	--------	838.29	804.46	238,620	95,392	--------	334,012	14,048	348,060
Idaho	5,726.68	19,342.86	--------	8,837.04	8,787.55	13,528.32	393.30	--------	10,527.87	10,468.90	1,047,728	310,192	--------	1,357,920	7,648	1,365,568
Nevada	--------	--------	--------	--------	--------	30.76	--------	--------	24.66	24.64	65,022	10,440	5,628	81,090	88	81,178
South Dakota	2,767.95	--------	--------	2,285.68	2,279.24	2,469.47	1,690.26	--------	2,332.16	2,325.59	2,167,673	454,960	2,406	2,625,039	7,416	2,632,455
Utah	--------	--------	--------	--------	--------	3,267.47	860.59	--------	2,927.50	2,600.35	84,775	13,944	--------	98,719	12,420	111,139
Other States [1]	31,013.20	--------	--------	23,317.45	22,896.04	2,755.01	503.86	554.87	2,199.61	2,159.86	193,466	47,632	16,220	257,318	4,736	262,054
Total	4,178.92	5,433.34	--------	4,400.71	4,349.57	5,002.17	2,555.48	1,736.69	4,481.58	4,429.50	4,307,333	1,104,294	42,034	5,453,661	64,120	5,517,781

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers
Arizona	--------	--------	--------	--------	--------	11	1	1	13	13	--------	--------	--------	--------	--------	160.61	42.47	416.67	137.66	137.66
California	--------	--------	--------	--------	--------	13	3	2	18	18	--------	--------	--------	--------	--------	29.44	20.24	130.04	29.75	28.90
Colorado	--------	--------	--------	--------	--------	11	4	--------	15	15	--------	--------	--------	--------	--------	46.10	41.93	--------	44.91	43.10
Idaho	1	1	--------	2	2	237	11	--------	248	248	.95	3.22	--------	1.47	1.46	226.20	35.46	--------	182.63	181.61
Nevada	--------	--------	--------	--------	--------	1	--------	--------	1	1	--------	--------	--------	--------	--------	15.38	--------	--------	12.33	12.32
South Dakota	1	--------	--------	1	1	106	33	--------	139	139	.46	--------	--------	.38	.38	48.90	72.53	--------	52.95	52.80
Utah	--------	--------	--------	--------	--------	8	2	--------	10	10	--------	--------	--------	--------	--------	94.37	143.43	--------	101.30	89.98
Other States [1]	1	--------	--------	1	1	24	4	1	29	29	5.17	--------	--------	3.89	3.82	124.05	83.98	61.65	112.70	110.66
Total	3	1	--------	4	4	411	58	4	473	473	.70	.91	--------	.73	.72	95.42	52.52	95.16	86.73	85.72

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[1] Includes Montana, New Mexico, North Carolina, Oregon, Washington, and Alaska.

TABLE 32.—*Employment data and injury experience at gold-silver lode mines, by States and Alaska, 1957*

State	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	13	40	11	3	54	2	56	123	164	100	130	300	136	4,903	1,800	300	7,003	600	7,603
California	54	103	30	17	150	6	156	178	211	105	176	180	176	18,324	6,333	1,782	26,439	1,077	27,516
Colorado	23	114	43	------	157	2	159	230	281	------	244	50	241	26,184	12,071	------	38,255	100	38,355
Idaho	29	828	64	5	897	55	952	246	224	89	243	257	244	203,374	14,325	444	218,143	14,116	232,259
Montana	29	53	1	6	60	------	60	220	365	208	221	------	221	11,638	365	1,245	13,248	------	13,248
Nevada	30	48	11	9	68	1	69	125	135	67	119	312	122	5,988	1,481	603	8,072	312	8,384
South Dakota	6	922	869	2	1,793	3	1,796	308	308	177	308	303	308	283,913	267,734	353	552,000	910	552,910
Utah	16	53	21	3	77	10	87	200	211	18	196	304	208	10,597	4,440	54	15,091	3,044	18,135
Other States [1]	36	110	29	16	155	9	164	225	201	87	206	191	206	24,781	5,822	1,390	31,993	1,720	33,713
Total	236	2,271	1,079	61	3,411	88	3,499	260	291	101	267	249	266	589,702	314,371	6,171	910,244	21,879	932,123

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total	Office-workers	Grand total
Arizona	------	------	------	------	------	891.77	1,264.93	------	948.49	873.46	39,248	14,230	2,400	55,878	4,800	60,678
California	42,427.41	------	------	28,976.83	27,819.25	714.19	449.46	------	598.85	574.93	141,418	51,173	14,471	207,062	8,616	215,678
Colorado	------	------	------	------	------	1,582.16	1,028.27	------	1,407.59	1,403.92	209,208	96,278	------	305,486	800	306,286
Idaho	11,066.97	------	------	10,317.68	9,690.41	1,628.07	909.37	------	1,577.46	1,481.56	1,626,462	114,365	3,752	1,744,579	112,928	1,857,507
Montana	------	------	------	------	------	------	------	------	------	------	93,061	2,920	9,960	105,941	------	105,941
Nevada	------	------	------	------	------	382.73	------	------	281.68	271.09	47,030	12,048	4,824	63,902	2,496	66,398
South Dakota	2,641.65	------	------	1,358.69	1,356.46	2,386.29	511.70	3,541.08	1,477.81	1,475.37	2,271,306	2,141,875	2,824	4,416,005	7,280	4,423,285
Utah	------	------	------	------	------	129.77	2,562.23	------	845.17	710.86	84,766	35,516	404	120,686	22,802	143,488
Other States [1]	30,233.10	------	------	23,368.49	22,180.16	161.24	3,121.10	------	689.37	654.31	198,458	46,458	11,840	256,756	13,756	270,512
Total	7,641.76	------	------	4,947.57	4,832.36	1,824.68	626.67	198.12	1,399.34	1,366.75	4,710,957	2,514,863	50,475	7,276,295	173,478	7,449,773

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers
Arizona	------	------	------	------	------	6	3	------	9	9	------	------	------	------	------	152.87	210.82	------	161.07	148.32
California	1	------	------	1	1	13	4	------	17	17	7.07	------	------	4.83	4.64	91.93	78.17	------	82.10	78.82
Colorado	------	------	------	------	------	12	3	------	15	15	------	------	------	------	------	57.36	31.16	------	49.10	48.97
Idaho	3	------	------	3	3	133	3	------	136	136	1.84	------	------	1.72	1.62	81.77	26.23	------	77.96	73.22
Montana	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Nevada	------	------	------	------	------	2	------	------	2	2	------	------	------	------	------	42.53	------	------	31.30	30.12
South Dakota	1	------	------	1	1	109	18	1	128	128	0.44	------	------	.23	.23	47.99	8.40	354.11	28.99	28.94
Utah	------	------	------	------	------	3	1	------	4	4	------	------	------	------	------	35.39	28.16	------	33.14	27.88
Other States [1]	1	------	------	1	1	11	5	------	16	16	5.04	------	------	3.89	3.70	55.43	107.62	------	62.32	59.15
Total	6	------	------	6	6	289	37	1	327	327	1.27	------	------	.82	.81	61.35	14.71	19.81	44.94	43.89

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[1] Includes New Mexico, North Carolina, Oregon, Virginia, Washington, Wyoming, and Alaska.

TABLE 33.—*Employment data and injury expereince at miscellaneous metal mines, by States and Alaska, 1956*

State	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Surface	Open-cut	Total	Office-workers	Grand total	Underground	Surface	Open-cut	Total	Office-workers	Grand total	Underground	Surface	Opencut	Total	Office-workers	Grand total
Alaska	7	32	25	-----	57	-----	57	151	179	-----	163	-----	163	4,837	4,480	-----	9,317	-----	9,317
Arizona	39	182	44	181	407	5	412	205	202	263	231	192	230	37,364	8,875	47,586	93,825	960	94,785
Arkansas	12	80	11	399	490	37	527	247	250	223	228	256	230	19,760	2,750	88,998	111,508	9,474	120,982
California	157	595	174	261	1,030	48	1,078	237	240	150	215	250	217	141,106	41,761	39,032	221,899	11,996	233,895
Colorado	303	1,926	255	77	2,258	380	2,638	248	220	136	241	313	252	478,230	56,072	10,481	544,783	118,869	663,652
Florida	4	-----	-----	154	154	59	213	-----	-----	307	307	265	296	-----	-----	47,350	47,350	15,629	62,979
Idaho	3	66	20	7	93	11	104	307	315	196	301	337	305	20,293	6,301	1,370	27,964	3,706	31,670
Montana	19	555	85	10	650	55	705	297	281	89	292	292	292	165,017	23,884	894	189,795	16,040	205,835
Nevada	71	580	120	127	827	45	872	293	299	248	287	275	286	170,001	35,845	31,552	237,398	12,373	249,771
New Mexico	25	185	23	283	491	92	583	274	283	246	258	287	263	50,687	6,512	69,496	126,695	26,397	153,092
Oregon	20	55	7	65	127	12	139	245	233	228	236	302	241	13,474	1,630	14,819	29,923	3,627	33,550
Tennessee	9	-----	-----	89	89	13	102	-----	-----	157	157	98	149	-----	-----	13,946	13,946	1,274	15,220
Utah	93	450	112	55	617	97	714	251	252	109	239	251	240	113,159	28,174	5,982	147,315	24,373	171,688
Wyoming	30	9	3	112	124	2	126	199	137	175	175	226	176	1,789	411	19,561	21,761	451	22,212
Other States [1]	23	570	60	54	684	42	726	287	295	173	279	284	279	163,583	17,727	9,343	190,653	11,924	202,577
Total	815	5,285	939	1,874	8,098	898	8,996	261	250	214	249	286	252	1,379,300	234,422	400,410	2,014,132	257,093	2,271,225

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Opencut	Total	Office-workers	Grand total
Alaska	148,514.85	-----	-----	75,738.45	75,738.45	1,608.91	12,416.28	-----	6,904.82	6,904.82	40,400	38,820	-----	79,220	-----	79,220
Arizona	-----	-----	-----	-----	-----	1,055.42	1,461.95	910.01	1,019.76	1,009.39	296,565	70,454	380,215	747,234	7,680	754,914
Arkansas	-----	-----	8,427.58	6,726.25	6,199.50	569.33	227.27	405.93	430.48	396.77	158,080	22,000	711,948	892,028	75,792	967,820
California	-----	17,963.96	19,159.78	6,738.29	6,393.58	1,150.21	452.09	7,386.10	2,115.82	2,007.58	1,133,709	334,002	313,156	1,780,867	96,016	1,876,883
Colorado	6,272.38	-----	-----	5,504.76	4,520.08	4,230.20	3,192.70	82.93	4,043.02	3,319.81	3,826,299	449,150	84,411	4,359,860	949,783	5,309,643
Florida	-----	-----	-----	-----	-----	-----	-----	1,972.61	1,972.61	1,481.98	-----	-----	377,673	377,673	125,034	502,707
Idaho	36,959.47	-----	547,445.26	53,642.07	47,364.93	911.67	6,150.18	182.48	2,056.28	1,815.66	162,340	50,405	10,960	223,705	29,647	253,352
Montana	-----	-----	-----	-----	-----	925.45	1,104.76	-----	943.44	869.95	1,320,441	190,992	7,472	1,518,905	128,320	1,647,225
Nevada	4,411.55	-----	-----	3,159.00	3,000.50	12,685.42	868.33	2,570.14	9,556.49	9,077.02	1,360,065	286,757	252,515	1,899,337	100,327	1,999,664
New Mexico	14,796.99	-----	-----	5,920.97	4,891.89	4,971.79	5,318.33	1,507.29	3,088.77	2,551.93	405,488	51,896	555,964	1,013,348	213,173	1,226,521
Oregon	-----	-----	-----	-----	-----	2,697.57	3,529.50	42.26	1,429.67	1,275.03	107,875	13,033	118,308	239,216	29,012	268,228
Tennessee	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	122,149	122,149	10,992	133,141
Utah	-----	26,554.66	-----	5,068.21	4,354.93	2,774.59	1,712.78	125,417.92	7,529.67	6,469.97	910,045	225,949	47,856	1,183,850	193,899	1,377,749
Wyoming	-----	-----	-----	-----	-----	1,467.30	-----	179.21	272.86	267.79	14,312	3,288	172,977	190,577	3,608	194,185
Other States [1]	9,170.48	-----	-----	7,866.90	7,405.08	1,060.72	7.05	4,752.37	1,119.72	1,053.99	1,308,547	141,814	75,017	1,525,378	95,131	1,620,509
Total	5,432.73	6,387.87	5,571.68	5,571.60	4,941.86	3,877.34	1,945.64	3,573.93	3,592.01	3,186.02	11,044,166	1,878,560	3,230,621	16,153,347	2,058,414	18,211,761

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers
Alaska	1			1	1	7	19		26	26	24.75			12.62	12.62	173.27	489.44		328.20	328.20
Arizona						16	5	15	36	36						53.95	70.97	39.45	48.18	47.69
Arkansas			1	1	1	1	1	8	10	10			1.40	1.12	1.03	6.32	45.45	11.24	11.21	10.33
California		1	1	2	2	143	14	43	200	200		2.99	3.19	1.12	1.07	126.13	41.92	137.31	112.30	106.56
Colorado	4			4	4	203	33	1	237	237	1.05			.92	.75	53.05	73.47	11.85	54.36	44.64
Florida								4	4	4								10.59	10.59	7.96
Idaho	1		1	2	2	14	3	2	19	19	6.16		91.24	8.94	7.89	86.24	59.52	182.48	84.93	74.99
Montana						51	12		63	63						38.62	62.83		41.48	38.25
Nevada	1			1	1	214	23	9	246	246	.74			.53	.50	157.35	80.21	35.64	129.52	123.02
New Mexico	1			1	1	41	9	19	69	69	2.47			.99	.82	101.11	173.42	34.17	68.09	56.26
Oregon						16	2	2	20	20						148.32	153.46	16.91	83.61	74.56
Tennessee																				
Utah		1		1	1	90	18	2	110	110		4.43		.84	.73	98.90	79.66	41.79	92.92	79.84
Wyoming						1		3	4	4						69.87		17.34	20.99	20.60
Other States [1]	2			2	2	76	9	1	86	86	1.53			1.31	1.23	58.08	63.46	13.33	56.38	53.07
Total	10	2	3	15	15	873	148	109	1,130	1,130	.91	1.06	.93	.93	.82	79.05	78.78	33.74	69.95	62.05

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[1] Includes Alabama, Georgia, North Carolina, North Dakota, South Dakota, Texas, Virginia, and Washington.

TABLE 34.—*Employment data and injury expereience at miscellaneous metal mines, by States and Alaska, 1957*

State	Active mines	Men employed						Average days active						Man-days worked					
		Under-ground	Surface	Open-cut	Total	Office-workers	Grand total	Under-ground	Surface	Open-cut	Total	Office-workers	Grand total	Under-ground	Surface	Opencut	Total	Office-workers	Grand total
Alaska	10	34	26	23	83	5	88	207	210	184	202	248	204	7, 025	5, 472	4, 230	16, 727	1, 238	17, 965
Arizona	59	236	63	119	418	16	434	256	248	225	246	207	244	60, 309	15, 630	26, 751	102, 690	3, 306	105, 996
Arkansas	11	129	19	184	332	6	338	227	221	177	199	263	200	29, 248	4, 208	32, 485	65, 941	1, 576	67, 517
California	104	370	146	177	693	98	791	242	272	108	214	246	218	89, 545	39, 704	19, 031	148, 280	24, 086	172, 366
Colorado	185	2, 096	300	73	2, 469	406	2, 875	250	236	168	246	302	254	523, 383	70, 664	12, 267	606, 314	122, 678	728, 992
Florida	4	--------	--------	89	89	44	133	--------	--------	294	294	254	281	--------	--------	26, 134	26, 134	11, 186	37, 320
Idaho	6	76	22	4	102	8	110	162	219	275	178	260	184	12, 275	4, 810	1, 100	18, 185	2, 078	20, 263
Montana	62	744	138	32	914	32	946	256	271	85	252	255	252	190, 116	37, 388	2, 730	230, 234	8, 154	238, 388
Nevada	40	327	50	129	506	88	594	249	248	231	244	303	253	81, 541	12, 413	29, 751	123, 705	26, 678	150, 383
New Mexico	38	250	84	321	655	102	757	240	275	284	266	292	270	60, 122	23, 135	91, 160	174, 417	29, 811	204, 228
Oregon	53	65	5	78	148	1	149	232	209	231	231	295	231	15, 081	1, 045	18, 010	34, 136	295	34, 431
South Dakota	9	31	6	11	48	7	55	189	247	60	167	216	173	5, 852	1, 480	662	7, 994	1, 514	9, 508
Tennessee	10	--------	--------	81	81	4	85	--------	--------	92	92	191	96	--------	--------	7, 425	7, 425	764	8, 189
Utah	106	734	199	25	958	105	1, 063	255	247	203	252	252	252	187, 217	49, 167	5, 070	241, 454	26, 410	267, 864
Virginia	11	--------	--------	110	110	13	123	--------	--------	76	76	96	78	--------	--------	8, 316	8, 316	1, 250	9, 566
Wyoming	30	29	14	96	139	6	145	228	171	209	209	162	207	6, 618	2, 392	20, 088	29, 098	971	30, 069
Other States [1]	19	404	98	138	640	39	679	225	241	233	229	236	230	91, 010	23, 613	32, 145	146, 768	9, 186	155, 954
Total	757	5, 525	1, 170	1, 690	8, 385	980	9, 365	246	249	200	237	277	241	1, 359, 342	291, 121	337, 355	1, 987, 818	271, 181	2, 258, 999

State	Severity rates per million man-hours										Man-hours worked					
	Fatal					Nonfatal										
	Under-ground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Opencut	Total, excluding office-workers	Total, including office-workers	Under-ground	Surface	Opencut	Total	Office-workers	Grand total
Alaska	--------	--------	--------	--------	--------	2, 527. 28	253. 29	1, 652. 68	1, 539. 86	1, 440. 04	57, 374	47, 376	38, 120	142, 870	9, 904	152, 774
Arizona	12, 483. 59	47, 984. 64	--------	14, 647. 42	14, 207. 49	1, 067. 35	1, 167. 63	800. 61	1, 013. 11	982. 68	480, 631	125, 040	213, 586	819, 257	25, 368	844, 625
Arkansas	--------	--------	--------	--------	--------	196. 46	4, 515. 21	8, 654. 29	4, 643. 44	4, 535. 24	234, 144	33, 664	260, 680	528, 488	12, 608	541, 096
California	8, 393. 65	18, 889. 43	--------	10, 127. 14	8, 724. 32	1, 254. 85	207. 78	557. 48	884. 44	761. 92	714, 826	317, 638	152, 471	1, 184, 935	190, 530	1, 375, 465
Colorado	5, 732. 68	--------	--------	4, 944. 22	4, 113. 02	1, 488. 59	770. 48	20. 44	1, 374. 70	1, 143. 59	4, 186, 520	569, 775	97, 857	4, 854, 152	980, 974	5, 835, 126
Florida	--------	--------	--------	--------	--------	--------	--------	2, 161. 43	2, 161. 43	1, 521. 65	--------	--------	212, 822	212, 822	89, 482	302, 304
Idaho	61, 101. 04	--------	--------	41, 243. 35	37, 013. 28	3, 065. 24	2, 182. 95	2, 840. 91	2, 818. 30	2, 529. 24	98, 198	38, 480	8, 800	145, 478	16, 626	162, 104
Montana	7, 899. 77	--------	--------	6, 522. 98	6, 299. 60	1, 336. 38	200. 60	650. 83	1, 143. 70	1, 104. 53	1, 519, 032	299, 106	21, 511	1, 839, 649	65, 234	1, 904, 883
Nevada	9, 217. 13	--------	25, 210. 19	12, 142. 48	9, 972. 77	8, 642. 59	11, 882. 58	10, 937. 02	9, 520. 72	7, 819. 48	650, 962	99, 305	237, 999	988, 266	215, 011	1, 203, 277
New Mexico	12, 515. 25	--------	--------	4, 304. 94	3, 675. 65	4, 092. 49	178. 32	201. 57	1, 536. 86	1, 312. 21	479, 415	185, 058	729, 274	1, 393, 747	238, 617	1, 632, 364
Oregon	--------	--------	--------	--------	--------	1, 199. 04	25, 193. 80	159. 53	1, 376. 03	1, 365. 68	120, 096	8, 256	144, 172	272, 524	2, 065	274, 589
South Dakota	--------	--------	--------	--------	--------	128. 16	--------	--------	93. 82	78. 88	46, 816	11, 840	5, 299	63, 955	12, 112	76, 067
Tennessee	--------	--------	--------	--------	--------	--------	--------	1, 436. 30	1, 436. 30	1, 308. 65	--------	--------	62, 661	62, 661	6, 112	68, 773
Utah	11, 981. 92	--------	--------	9, 274. 69	8, 361. 82	1, 513. 05	690. 87	401. 82	1, 320. 61	1, 190. 63	1, 502, 264	393, 705	44, 796	1, 940, 765	211, 876	2, 152, 641
Virginia	--------	--------	--------	--------	--------	--------	--------	1, 499. 64	1, 499. 64	1, 310. 65	--------	--------	69, 350	69, 350	10, 000	79, 350
Wyoming	--------	--------	--------	--------	--------	3, 774. 87	352. 54	1, 746. 38	2, 062. 24	1, 999. 80	52, 982	19, 856	179, 800	252, 638	7, 888	260, 526
Other States [1]	--------	--------	--------	--------	--------	3, 112. 29	614. 08	878. 83	2, 221. 20	2, 090. 36	728, 082	188, 900	257, 160	1, 174, 142	73, 490	1, 247, 632
Total	7, 726. 74	5, 132. 59	2, 192. 70	6, 396. 71	5, 631. 13	2, 082. 63	1, 186. 91	2, 412. 33	2, 007. 88	1, 767. 57	10, 871, 342	2, 337, 999	2, 736, 358	15, 945, 699	2, 107, 897	18, 113, 596

State	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers	Underground	Surface	Open-cut	Total, excluding office-workers	Total, including office-workers
Alaska						8	3	6	17	17						139.44	63.32	157.40	118.99	111.28
Arizona	1	1		2	2	28	10	15	53	53	2.08	8.00		2.44	2.37	58.26	79.97	70.23	64.69	62.75
Arkansas						4	8	13	25	25						17.08	237.64	49.87	47.30	46.20
California	1	1		2	2	46	10	2	58	58	1.40	3.15		1.69	1.45	64.35	31.48	13.12	48.95	42.17
Colorado	4			4	4	197	27	2	226	226	.96			.82	.69	47.06	47.39	20.44	46.56	38.73
Florida								6	6	6								28.19	28.19	19.85
Idaho	1			1	1	10	15	2	27	27	10.18			6.87	6.17	101.84	389.81	227.27	185.60	166.56
Montana	2			2	2	71	1	1	73	73	1.32			1.09	1.05	46.74	3.34	46.49	39.68	38.32
Nevada	1		1	2	2	93	8	11	112	112	1.54		4.20	2.02	1.66	142.87	80.56	46.22	113.33	93.08
New Mexico	1			1	1	39	6	14	59	59	2.09			.72	.61	81.35	32.42	19.20	42.33	36.14
Oregon						10	4	4	18	18						83.27	484.50	27.74	66.05	65.55
South Dakota						2			2	2						42.72			31.27	26.29
Tennessee								1	1	1								15.96	15.96	14.54
Utah	3			3	3	117	12	5	134	134	2.00			1.55	1.39	77.88	30.48	111.62	69.04	62.25
Virginia								3	3	3								43.26	43.26	37.81
Wyoming						1	1	4	6	6						18.87	50.36	22.25	23.75	23.03
Other States[1]						49	3	2	54	54						67.30	15.88	7.78	45.99	43.28
Total	14	2	1	17	17	675	108	91	874	874	1.29	.86	.37	1.07	.94	62.09	46.19	33.26	54.81	48.25

[1] Includes Alabama, Georgia, North Carolina, South Carolina, Texas, and Washington.

SELECTED INJURY DATA

(Tables 35 and 36)

MISCELLANEOUS METAL MINES

The 1957 safety record for miscellaneous metal mines, as shown in tables 35 and 36 revealed an improvement over that recorded for the preceding year.

Four of the mineral classifications shown furnished a substantial portion of man-hours worked at all miscellaneous metal mines in both 1956 and 1957. In 1957 these mineral classifications were manganese, mercury, tungsten, and uranium-vanadium; their accumulated man-hours supplied 74.9 percent of the total man-hours recorded for miscellaneous minerals. In 1956 the list was changed slightly to include molybdenum instead of mercury, however, the man-hours for this group totaled 13,597,738, or 84.2 percent of all miscellaneous-minerals man-hours reported. Consequently, any increase or decrease in the miscellaneous metal-mines injury-frequency rate will largely reflect the injury experience of these four mineral classifications.

TABLE 35.—*Employment data and injury experience at miscellaneous metal mines, by mineral and work location, 1956*

Metal	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Opencut	Surface	Total	Office-workers	Grand total
Bauxite	11	------	233	------	233	39	272	------	224	------	224	258	229	------	52, 168	------	52, 168	10, 059	62, 227
Chromite	53	181	83	45	309	48	357	253	102	200	205	297	217	45, 862	8, 449	8, 989	63, 300	14, 260	77, 560
Manganese	56	664	490	94	1, 248	50	1, 298	285	190	269	246	209	245	188, 909	93, 322	25, 249	307, 480	10, 461	317, 941
Mercury	49	247	63	69	379	18	397	269	167	276	253	255	253	66, 434	10, 534	19, 036	96, 004	4, 593	100, 597
Molybdenum	3	787	------	21	808	322	1, 130	310	------	307	310	310	310	243, 682	------	6, 438	250, 120	99, 818	349, 938
Pyrite	3	96	31	39	166	15	181	217	256	255	233	253	235	20, 799	7, 936	9, 964	38, 699	3, 788	42, 487
Titanium	5	------	160	------	160	59	219	------	310	------	310	265	298	------	49, 546	------	49, 546	15, 629	65, 175
Tungsten	170	1, 528	164	270	1, 962	82	2, 044	275	134	277	263	283	264	419, 525	22, 021	74, 715	516, 261	23, 232	539, 493
Uranium-vanadium	451	1, 770	584	396	2, 750	246	2, 996	222	240	225	226	281	230	392, 233	140, 124	89, 088	621, 445	69, 053	690, 498
Other metals [1]	14	12	66	5	83	19	102	155	247	189	230	326	248	1, 856	16, 310	943	19, 109	6, 200	25, 309
Total	815	5, 285	1, 874	939	8, 098	898	8, 996	261	214	250	249	286	252	1, 379, 300	400, 410	234, 422	2, 014, 132	257, 093	2, 271, 225

Metal	Man-hours worked						Average hours worked per man per day						Average hours worked per man per year					
	Underground	Opencut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total
Bauxite	------	417, 959	------	417, 959	80, 468	498, 427	------	8. 0	------	8. 0	8. 0	8. 0	------	1, 794	------	1, 794	2, 063	1, 832
Chromite	367, 685	67, 949	74, 889	510, 523	114, 080	624, 603	8. 0	8. 0	8. 3	8. 1	8. 0	8. 1	2, 031	819	1, 664	1, 652	2, 377	1, 750
Manganese	1, 511, 573	757, 111	201, 712	2, 470, 396	86, 336	2, 556, 732	8. 0	8. 1	8. 0	8. 0	8. 3	8. 0	2, 276	1, 545	2, 146	1, 979	1, 727	1, 970
Mercury	533, 323	84, 153	152, 431	769, 907	36, 738	806, 645	8. 0	8. 0	8. 0	8. 0	8. 0	8. 0	2, 159	1, 336	2, 209	2, 031	2, 041	2, 032
Molybdenum	1, 949, 457	------	51, 504	2, 000, 961	798, 697	2, 799, 658	8. 0	------	8. 0	8. 0	8. 0	8. 0	2, 477	------	2, 453	2, 476	2, 480	2, 478
Pyrite	166, 279	63, 488	79, 114	308, 881	30, 307	339, 188	8. 0	8. 0	7. 9	8. 0	8. 0	8. 0	1, 732	2, 048	2, 029	1, 861	2, 020	1, 874
Titanium	------	395, 241	------	395, 241	125, 034	520, 275	------	8. 0	------	8. 0	8. 0	8. 0	------	2, 470	------	2, 470	2, 119	2, 376
Tungsten	3, 356, 602	176, 204	597, 527	4, 130, 333	187, 248	4, 317, 581	8. 0	8. 0	8. 0	8. 0	8. 1	8. 0	2, 197	1, 074	2, 213	2, 105	2, 284	2, 112
Uranium-vanadium	3, 144, 159	1, 138, 050	713, 839	4, 996, 048	549, 906	5, 545, 954	8. 0	8. 1	8. 0	8. 0	8. 0	8. 0	1, 776	1, 949	1, 803	1, 817	2, 235	1, 851
Other metals [1]	15, 088	130, 466	7, 544	153, 098	49, 600	202, 698	8. 1	8. 0	8. 0	8. 0	8. 0	8. 0	1, 257	1, 977	1, 509	1, 845	2, 611	1, 987
Total	11, 044, 166	3, 230, 621	1, 878, 560	16, 153, 347	2, 058, 414	18, 211, 761	8. 0	8. 1	8. 0	8. 0	8. 0	8. 0	2, 090	1, 724	2, 001	1, 995	2, 292	2, 024

Metal	Injuries										Injury-frequency ratio per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Open-cut	Surface	Total excluding office workers	Total including office workers	Underground	Open-cut	Surface	Total excluding office workers	Total including office workers	Underground	Open-cut	Surface	Total excluding office workers	Total including office workers	Underground	Open-cut	Surface	Total excluding office workers	Total including office workers
Bauxite	------	1	------	1	1	------	5	------	5	5	------	2. 39	------	2. 39	2. 01	------	11. 96	------	11. 96	10. 03
Chromite	------	------	------	------	------	26	5	12	43	43	------	------	------	------	------	70. 71	73. 58	160. 24	84. 23	68. 84
Manganese	------	------	------	------	------	72	21	10	103	103	------	------	------	------	------	47. 63	27. 74	49. 58	41. 69	40. 29
Mercury	1	1	1	3	3	82	10	28	120	120	1. 88	11. 88	6. 56	3. 90	3. 72	153. 75	118. 83	183. 69	155. 86	148. 76
Molybdenum	1	------	------	1	1	98	------	6	104	104	. 51	------	------	. 50	. 36	50. 27	------	116. 50	51. 98	37. 15
Pyrite	------	------	------	------	------	3	4	4	11	11	------	------	------	------	------	18. 04	63. 00	50. 56	35. 61	32. 43
Titanium	------	------	------	------	------	------	4	------	4	4	------	------	------	------	------	------	10. 12	------	10. 12	7. 69
Tungsten	4	1	------	5	5	372	27	31	430	430	1. 19	5. 68	------	1. 21	1. 16	110. 83	153. 23	51. 88	104. 11	99. 59
Uranium-vanadium	4	------	1	5	5	220	30	57	307	307	1. 27	------	1. 40	1. 00	. 90	69. 97	26. 36	79. 85	61. 45	55. 36
Other metals [1]	------	------	------	------	------	------	3	------	3	3	------	------	------	------	------	------	22. 99	------	19. 60	14. 80
Total	10	3	2	15	15	873	109	148	1, 130	1, 130	. 91	. 93	1. 06	. 93	. 82	79. 05	33. 74	78. 78	69. 95	62. 05

[1] Includes antimony and minor metals.

TABLE 36.—*Employment data and injury experience at miscellaneous metal mines, by mineral and work location, 1957*

Metal	Active mines	Men employed						Average days active						Man-days worked					
		Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Opencut	Surface	Total	Office-workers	Grand total
Bauxite	15	55	69	9	133	12	145	195	121	190	157	245	164	10,748	8,379	1,708	20,835	2,940	23,775
Chromite	87	205	55	95	355	22	377	240	92	268	224	250	226	49,172	5,057	25,444	79,673	5,499	85,172
Manganese	117	754	479	94	1,327	71	1,398	247	146	247	211	248	213	186,345	69,903	23,255	279,503	17,601	297,104
Mercury	52	286	98	105	489	19	508	286	134	290	257	237	256	81,932	13,159	30,467	125,558	4,494	130,052
Titanium	7	--------	112	--------	112	53	165	--------	290	--------	290	253	278	--------	32,485	--------	32,485	13,406	45,891
Tungsten	56	878	61	159	1,098	57	1,155	220	93	227	214	236	215	193,107	5,672	36,074	234,853	13,470	248,323
Uranium-vanadium	384	2,430	574	594	3,598	262	3,860	230	256	240	236	268	238	559,136	146,989	142,609	848,734	70,099	918,833
Magnesium	3	--------	140	44	184	107	291	--------	259	256	258	269	262	--------	36,239	11,263	47,502	28,732	76,234
Other metals [1]	36	917	102	70	1,089	377	1,466	304	191	290	293	305	296	278,902	19,472	20,301	318,675	114,940	433,615
Total	757	5,525	1,690	1,170	8,385	980	9,365	246	200	249	237	277	241	1,359,342	337,355	291,121	1,987,818	271,181	2,258,999

Metal	Man-hours worked						Average hours worked per man per day						Average hours worked per man per year					
	Underground	Opencut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total	Underground	Open-cut	Surface	Total	Office-workers	Grand total
Bauxite	86,144	67,029	13,664	166,837	23,522	190,359	8.01	8.00	8.00	8.01	8.00	8.01	1,566	971	1,518	1,254	1,960	1,313
Chromite	393,260	39,958	207,045	640,263	43,697	683,960	8.00	7.90	8.14	8.04	7.95	8.03	1,918	727	2,179	1,804	1,986	1,814
Manganese	1,488,858	566,921	186,046	2,241,825	139,920	2,381,745	7.99	8.11	8.00	8.02	7.95	8.02	1,975	1,184	1,979	1,689	1,971	1,704
Mercury	654,197	106,237	243,739	1,004,173	35,555	1,039,728	7.98	8.07	8.00	8.00	7.91	7.99	2,287	1,084	2,321	2,054	1,871	2,047
Titanium	--------	262,120	--------	262,120	107,242	369,362	--------	8.07	--------	8.07	8.00	8.05	--------	2,340	--------	2,340	2,023	2,239
Tungsten	1,543,182	45,260	288,255	1,876,697	108,480	1,985,177	7.99	7.98	7.99	7.99	8.05	7.99	1,758	742	1,813	1,709	1,903	1,719
Uranium-vanadium	4,474,293	1,203,320	1,146,747	6,824,360	560,404	7,384,764	8.00	8.19	8.04	8.04	7.99	8.04	1,841	2,096	1,931	1,897	2,139	1,913
Magnesium	--------	289,914	90,100	380,014	229,854	609,868	--------	8.00	8.00	8.00	8.00	8.00	--------	2,071	2,048	2,065	2,148	2,096
Other metals [1]	2,231,408	155,599	162,403	2,549,410	919,223	3,468,633	8.00	7.99	8.00	8.00	8.00	8.00	2,433	1,525	2,320	2,341	2,438	2,366
Total	10,871,342	2,736,358	2,337,999	15,945,699	2,167,897	18,113,596	8.00	8.11	8.03	8.02	7.99	8.02	1,968	1,619	1,998	1,902	2,212	1,934

Metal	Injuries										Injury-frequency rates per million man-hours									
	Fatal					Nonfatal					Fatal					Nonfatal				
	Underground	Open-cut	Surface	Total excluding office workers	Total including office workers	Underground	Open-cut	Surface	Total excluding office workers	Total including office workers	Underground	Open-cut	Surface	Total excluding office workers	Total including office workers	Underground	Open-cut	Surface	Total excluding office workers	Total including office workers
Bauxite	--------	--------	--------	--------	--------	4	1	1	6	6	--------	--------	--------	--------	--------	46.43	14.92	73.19	35.96	31.52
Chromite	--------	--------	--------	--------	--------	14	1	7	22	22	--------	--------	--------	--------	--------	35.60	25.03	33.81	34.36	32.17
Manganese	2	--------	--------	2	2	78	25	11	114	114	1.34	--------	--------	0.89	0.84	52.39	44.10	59.13	50.85	47.86
Mercury	3	--------	1	4	4	75	3	23	101	101	4.59	--------	4.10	3.98	3.85	114.64	28.24	94.36	100.58	97.14
Titanium	--------	--------	--------	--------	--------	--------	7	--------	7	7	--------	--------	--------	--------	--------	--------	26.71	--------	26.71	18.95
Tungsten	--------	1	--------	1	1	123	1	12	136	136	--------	22.09	--------	.53	.50	79.71	22.09	41.63	72.47	68.51
Uranium-vanadium	7	--------	1	8	8	272	38	50	360	360	1.56	--------	.87	1.17	1.08	60.79	31.58	43.60	52.75	48.75
Magnesium	--------	--------	--------	--------	--------	--------	11	--------	11	11	--------	--------	--------	--------	--------	--------	37.94	--------	28.95	18.04
Other metals [1]	2	--------	--------	2	2	109	4	4	117	117	.90	--------	--------	.78	.58	48.85	25.71	24.63	45.89	33.73
Total	14	1	2	17	17	675	91	108	874	874	1.29	.37	.86	1.07	.94	62.09	33.26	46.19	54.81	48.25

[1] Includes antimony, cobalt, molybdenum, zirconium, columbium-tantalum, and other minor metals.

PLACER MINES

Tables 37–44

Placer mines reported a very slight increase in the number of men employed in 1957, accompanied by a 12-percent decrease in man-hours worked. The combined (fatal and nonfatal) injury-frequency rate was 59.67 in 1957, compared with a rate of 51.16 in 1956, or an increase of 17 percent. Dredging operations reported the greatest number of injuries (121), and hydraulicking and surface operations were responsible for 21—a grand total of 142 for 1957—or a 3-percent increase in numbers of injuries over the preceding year.

TABLE 37.—*Employment data and injury experience at gold placer mines in the United States and Alaska, 1956*

EXCLUDING OFFICEWORKERS

State and territory	Active Mines	Men employed	Man-days worked	Man-hours worked	Average days active	Injuries		Injury-frequency rates	
						Fatal	Nonfatal	Fatal	Nonfatal
Alaska [1]	140	1,085	204,065	1,790,108	188	----------	109	----------	60.89
California	25	388	99,671	798,383	257	----------	24	----------	30.06
Idaho	5	45	12,084	96,669	269	----------	5	----------	51.72
Other States [2]	14	21	1,596	12,345	76	----------	----------	----------	----------
Total	184	1,539	317,416	2,697,505	206	----------	138	----------	51.16

INCLUDING OFFICEWORKERS

State and territory	Active Mines	Men employed	Man-days worked	Man-hours worked	Average days active	Injuries		Injury-frequency rates	
						Fatal	Nonfatal	Fatal	Nonfatal
Alaska [1]	140	1,113	212,523	1,861,097	191	----------	109	----------	58.55
California	25	396	101,571	813,503	256	----------	24	----------	29.50
Idaho	5	45	12,084	96,669	269	----------	5	----------	51.72
Other States [2]	14	21	1,596	12,345	76	----------	----------	----------	----------
Total	184	1,575	327,774	2,784,214	208	----------	138	----------	49.57

[1] Includes 1 platinum operation.
[2] Arizona, Montana, Nevada, and Oregon.

TABLE 38.—*Employment data and injury experience at gold placer mines in the United States and Alaska, 1957*

EXCLUDING OFFICEWORKERS

State and territory	Active Mines	Men employed	Man-days worked	Man-hours worked	Average days active	Injuries		Injury-frequency rates	
						Fatal	Nonfatal	Fatal	Nonfatal
Alaska [1]	113	1,061	198,647	1,666,604	187	----------	102	----------	61.20
California	38	298	60,963	486,315	205	1	19	2.06	39.07
Idaho	26	49	9,718	77,425	198	1	8	12.92	103.33
Other States [2]	34	143	18,491	149,438	129	----------	11	----------	73.61
Total	211	1,551	287,819	2,379,782	186	2	140	.84	58.83

INCLUDING OFFICEWORKERS

State and territory	Active Mines	Men employed	Man-days worked	Man-hours worked	Average days active	Injuries		Injury-frequency rates	
						Fatal	Nonfatal	Fatal	Nonfatal
Alaska [1]	113	1,092	207,938	1,740,735	190	----------	102	----------	58.60
California	38	319	66,626	531,619	209	1	19	1.88	35.74
Idaho	26	49	9,718	77,425	198	1	8	12.92	103.33
Other States [2]	34	146	18,791	151,838	129	----------	11	----------	72.45
Total	211	1,606	303,073	2,501,617	189	2	140	.80	55.96

[1] Includes 1 platinum operation.
[2] Includes Arizona, Colorado, Montana, Nevada, and Oregon.

TABLE 39.—*Men employed, man-days and man-hours worked, and fatal and nonfatal injuries at gold placer mines,*[1] *by mining method, 1956*

	Under-ground	Surface	Dredging	Hydrau-licking	Other methods	Total	Office-workers	Grand total
Men employed	11	128	737	79	584	1,539	36	1,575
Man-days of employment	1,381	37,398	161,928	10,582	106,127	317,416	10,358	327,774
Average days active	126	292	220	134	182	206	288	[illegible]
Man-hours of employment	11,048	314,368	1,335,771	97,224	939,094	2,697,505	86,709	[illegible]
Fatalities								
Nonfatal injuries		47	63	3	25	138		138
Fatalities per million man-hours								
Nonfatal injuries per million man-hours		149.51	47.16	30.86	26.62	51.16		[illegible]
Active mines	5	1	33	23	122	184		184

[1] Includes 1 platinum operation.

TABLE 40.—*Men employed, man-days and man-hours worked, and fatal and nonfatal injuries at gold placer mines,*[1] *by mining method, 1957*

	Under-ground	Surface	Dredging	Hydrau-licking	Other methods	Total	Office-workers	Grand total
Men employed	11	52	1,077	66	345	1,551	55	[illegible]
Man-days of employment	1,134	5,120	236,368	8,542	36,655	287,819	15,254	[illegible]
Average days active	103	98	219	129	106	186	277	[illegible]
Man-hours of employment	8,508	40,191	1,923,756	69,539	337,788	2,379,782	121,835	[illegible]
Fatalities		1	1			2		2
Nonfatal injuries			120		20	140		[illegible]
Fatalities per million man-hours		24.88	.52			.84		[illegible]
Nonfatal injuries per million man-hours			62.38		59.21	58.83		[illegible]
Active mines	11	5	39	30	126	211		211

[1] Includes 1 platinum operation.

TABLE 41.—*Injuries at gold placer mines in the United States and Alaska, by mining method and degree of injury, 1955 and 1956*

	1955						1956					
	Fatal	Perma-nent total	Perma-nent partial	Tempo-rary	Total nonfatal	Total fatal and nonfatal	Fatal	Perma-nent total	Perma-nent partial	Tempo-rary	Total nonfatal	Total fatal and nonfatal
Underground												
Surface									1	46	47	47
Dredging			1	125	126	126			4	59	63	63
Hydraulicking			1		1	1				3	3	3
Other methods				5	5	5				25	25	25
Total			2	130	132	132			5	133	138	138

TABLE 42.—*Injuries at gold placer mines in the United States and Alaska, by mining method and degree of injury, 1956 and 1957*

	1956						1957					
	Fatal	Perma-nent total	Perma-nent partial	Tempo-rary	Total nonfatal	Total fatal and nonfatal	Fatal	Perma-nent total	Perma-nent partial	Tempo-rary	Total nonfatal	Total fatal and nonfatal
Underground												
Surface			1	46	47	47	1					1
Dredging			4	59	63	63	1		2	118	120	[illegible]
Hydraulicking				3	3	3						
Other methods				25	25	25				20	20	[illegible]
Total			5	133	138	138	2		2	138	140	[illegible]

TABLE 43.—*Fatal and nonfatal injuries at gold placer mines, by location and agency, 1955 and 1956*

Location and accident agency	1955		1956	
	Fatal	Nonfatal	Fatal	Nonfatal
Underground:				
Fall of rock or ore from roof or wall				
Handling rock or ore				
Handtools				
Explosives				
Haulage				
Falling down chute, winze, raise or stope				
Other falls of persons				
Run of ore from raise, chute or pocket				
Drilling				
Electricity				
Machinery (other than locomotives or drill)				
Mines fires				
Suffocation from natural gases				
Inrush of water				
Stepping on nail				
Handling materials (other than rock or ore)				
Other causes				
Total underground				
Shaft:				
Falling down shaft				
Objects falling down shaft				
Breaking of cables				
Overwinding				
Cage, skip, or bucket				
Total shaft				
Surface:				
Mine cars, mine locomotives, or aerial trams				
Railway cars or locomotives				
Run or fall of ore in or from ore bins				
Falls of persons		15		14
Surface:—Continued				
Stepping on nail				1
Handtools		20		10
Electricity				1
Machinery		7		3
Handling material and equipment		39		14
Other causes		50		4
Total surface		131		47
Dredging:				
Machinery				8
Electricity				1
Boiler explosions or bursting steam pipes				1
Falls of persons				15
Handtools				7
Handling materials and equipment				21
Other causes				10
Total dredging				63
Hydraulicking:				
Cave of bank				
Explosives		1		
Hydraulic giants				
Falls of persons				
Rock while handling				
Handtools				2
Machinery, derricks, etc				
Handling materials (other than rock or ore) and equipment				1
Other causes				
Total hydraulicking		1		3
Other methods				25
Grand total		132		138

TABLE 44.—*Fatal and nonfatal injuries at gold placer mines, by location and agency 1956 and 1957*

Location and accident agency	1956		1957	
	Fatal	Non-fatal	Fatal	Non-fatal
Underground:				
Fall of rock or ore from roof or wall				
Handling rock or ore				
Handtools				
Explosives				
Haulage				
Falling down chute, winze, raise or stope				
Other falls of persons				
Run of ore from raise, chute or pocket				
Drilling				
Electricity				
Machinery other than locomotives or drills)				
Mine fires				
Suffocation from natural gases				
Inrush of water				
Stepping on nail				
Handling materials (other than rock or ore)				
Other causes				
Total underground				
Shaft:				
Falling down shaft				
Objects falling down shaft				
Breaking of cables				
Overwinding				
Cage, skip, or bucket				
Total shaft				
Surface:				
Mine cars, mine locomotives, or aerial trams				
Railway cars or locomotives				
Run or fall of ore in or from ore bins				
Falls of persons		14		
Stepping on nail		1		
Surface—Continued				
Handtools		10		
Electricity		1		
Machinery		3		
Handling materials and equipment		14	1	
Other causes		4		
Total surface		47	1	
Dredging:				
Machinery		8		1
Electricity		1		1
Boiler explosions or bursting steam pipes		1		
Falls of persons		15		2
Hand tools		7		1
Handling materials and equipment		21		5
Other causes		10	1	11
Total dredging		63	1	12
Hydraulicking:				
Cave of bank				
Explosives				
Hydraulic giants				
Falls of persons				
Rock while handling				
Handtools		2		
Machinery derricks, etc				
Handling materials (other than rock or ore) and equipment		1		
Other causes				
Total hydraulicking		3		
Other methods		25		3
Grand total		138	2	14

MINING METHODS

(Tables 45 and 46)

The injury experience in the metal industry of the United States and Alaska, by location, size group and mining method, is found in tables 45 and 46, classified in this publication as follows:

Underground mine:
  - Room and pillar
  - Open stoping
  - Shrinkage
  - Square set
  - Top slice
  - Block caving
  - Sublevel caving
  - Other methods
  - Not stated

Opencut mine:
  - Shovels or draglines
  - Scrapers
  - Hand loading
  - Other methods
  - Not stated

The opencut mining methods shown above were applicable in 1956; a breakdown was not available in 1957.

TABLE 45.—*Employment data and injury experience in the metal industry of the United States and Alaska, by work location, size group, and mining method, 1956*

Size group and mining method	Active mines	Men employed	Average days active	Man-days worked	Man-hours worked	Injuries		Injury-frequency rates	
						Fatal	Nonfatal	Fatal	Nonfatal
	Underground								
25 or more men:									
Open stoping	82	7,995	254	2,032,257	16,279,962	12	823	0.74	50.55
Timbered stoping	20	3,281	234	766,437	6,131,947	6	502	.98	81.87
Filled stoping	5	546	286	155,980	1,247,836	----------	106	----------	84.95
Shrinkage stoping	16	1,435	252	362,014	2,899,858	5	344	1.72	118.63
Caving methods	27	7,599	261	1,981,963	15,855,714	8	727	.50	45.85
Combined methods	221	7,499	269	2,019,104	16,155,776	17	887	1.05	54.90
Not stated	22	4,744	295	1,399,228	11,193,831	14	418	1.25	37.34
Total	393	33,099	263	8,716,983	69,764,924	62	3,807	.89	54.57
15 to 24 men: [1]									
Open stoping	38	481	285	136,975	1,095,793	----------	71	----------	64.79
Timbered stoping	4	75	291	21,845	174,762	----------	13	----------	74.39
Filled stoping	1	23	232	5,329	42,631	----------	2	----------	46.91
Shrinkage stoping	5	96	220	21,121	168,963	----------	13	----------	76.94
Caving methods	1	23	314	7,225	57,800	----------	19	----------	328.72
Combined methods	31	150	186	27,910	223,262	3	22	13.44	98.54
Not stated	7	487	267	130,214	1,041,711	1	198	.96	190.07
Total	87	1,335	263	350,619	2,804,922	4	338	1.43	120.50
1 to 14 men: [1]									
Open stoping	180	716	208	148,939	1,192,829	4	61	3.35	51.14
Timbered stoping	71	256	194	49,669	398,034	1	35	2.51	87.93
Filled stoping	11	42	214	8,969	71,750	----------	8	----------	111.50
Shrinkage stoping	29	159	227	36,070	288,269	1	28	3.47	97.13
Caving methods	5	17	235	3,989	31,291	----------	----------	----------	----------
Combined methods	150	524	203	106,471	843,939	1	76	1.18	90.05
Not stated	135	352	164	57,662	461,159	1	17	2.17	36.86
Total	581	2,066	199	411,769	3,287,271	8	225	2.43	68.45
	Opencut								
25 or more men:									
Shovels or draglines	144	17,772	293	5,204,677	41,640,649	4	387	0.10	9.29
Scrapers	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Hand loading	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Other methods	2	275	272	74,742	597,936	1	5	1.64	8.36
Not stated	5	407	222	90,258	755,464	----------	10	----------	13.24
Total	151	18,454	291	5,369,677	42,994,049	5	402	.12	9.35
15 to 24 men: [1]									
Shovels or draglines	19	373	185	69,010	573,281	----------	18	----------	31.40
Scrapers	(2)	(2)	(2)	(2)	(2)	----------	(2)	----------	(2)
Hand loading	(2)	(2)	(2)	(2)	(2)	----------	(2)	----------	(2)
Other methods	15	134	190	25,524	205,922	----------	2	----------	9.71
Not stated	3	61	227	13,821	123,378	----------	9	----------	72.95
Total	37	568	191	108,355	902,581	----------	29	----------	32.13
1 to 14 men: [1]									
Shovels or draglines	93	497	164	81,397	667,607	3	43	4.49	64.41
Scrapers	27	97	124	11,082	101,415	----------	7	----------	69.02
Hand loading	71	163	83	13,602	108,351	----------	3	----------	27.69
Other methods	71	225	150	33,660	273,244	----------	13	----------	47.58
Not stated	65	162	112	18,181	151,762	----------	3	----------	19.77
Total	327	1,144	139	158,822	1,302,379	3	69	2.30	52.98

[1] This size group not used before 1955.
[2] None reported for this group.

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TABLE 46.—*Employment data and injury experience in the metal industry of the United States and Alaska, by location, size group and mining method, 1957*

Size group and mining method	Underground								
	Active mines	Men employed	Average days active	Man-days worked	Man-hours worked	Injuries		Injury-frequency rates	
						Fatal	Nonfatal	Fatal	Nonfatal
25 or more men:									
Room and pillar	26	4, 099	255	1, 043, 393	8, 347, 146	5	309	0. 60	37. 02
Open stope	108	5, 659	240	1, 358, 391	10, 857, 690	10	537	. 92	49. 46
Shrinkage	24	1, 670	267	446, 573	3, 572, 489	2	385	. 56	107. 77
Square set	13	2, 516	283	711, 474	5, 691, 789	4	446	. 70	78. 36
Top slice	3	479	241	115, 309	922, 473	---------	23	---------	24. 93
Block caving	11	4, 595	286	1, 312, 786	10, 502, 327	5	604	. 48	57. 51
Sub-level caving	14	3, 104	245	760, 469	6, 083, 761	1	127	. 16	20. 88
Other	16	3, 495	286	999, 107	7, 992, 855	4	406	. 50	50. 80
Not stated	16	278	249	69, 136	552, 792	3	50	5. 43	90. 45
Total	231	25, 895	263	6, 816, 638	54, 523, 322	34	2, 887	. 62	52. 95
15 to 24 men:[1]									
Room and pillar	21	376	208	78, 084	624, 667	---------	26	---------	41. 62
Open stope	10	176	272	47, 831	382, 688	---------	26	---------	67. 94
Shrinkage	5	106	274	29, 062	232, 515	---------	40	---------	172. 03
Square set	4	75	282	21, 149	169, 192	1	22	5. 91	130. 03
Top slice	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Block caving	1	23	260	5, 980	48, 000	---------	4	---------	83. 33
Sub-level caving	1	15	165	2, 481	19, 848	---------	---------	---------	---------
Other	7	129	266	34, 272	274, 341	---------	23	---------	83. 84
Not stated	3	64	245	15, 662	125, 296	---------	11	---------	87. 79
Total	52	964	243	234, 521	1, 876, 547	1	152	. 53	81. 00
1 to 14 men:[1]									
Room and pillar	74	305	175	53, 295	418, 291	---------	17	---------	40. 64
Open stope	189	679	183	124, 202	998, 699	4	52	4. 01	52. 07
Shrinkage	42	177	178	31, 503	249, 972	1	29	4. 00	116. 01
Square set	27	88	199	17, 550	137, 295	1	6	7. 28	43. 70
Top slice	2	5	169	847	6, 776	---------	---------	---------	---------
Block caving	3	9	136	1, 224	9, 743	---------	---------	---------	---------
Sub-level caving	(2)	(2)	---------	(2)	(2)	(2)	(2)	(2)	(2)
Other	69	186	155	28, 820	228, 483	---------	10	---------	43. 77
Not stated	154	356	125	44, 556	352, 789	---------	13	---------	36. 85
Total	560	1, 805	167	301, 997	2, 402, 048	6	127	2. 50	52. 87
	Opencut								
25 or more men	193	17, 152	293	5, 021, 041	40, 183, 218	6	294	. 15	7. 32
15 to 24 men	40	696	175	121, 804	1, 028, 610	---------	32	---------	31. 11
1 to 14 men	292	984	153	150, 518	1, 246, 489	3	35	2. 41	28. 08

[1] This group not used before 1955.
[2] None reported for this group.
[3] No breakdown available for opencut mines in 1957.

HISTORICAL INJURY EXPERIENCE IN THE METAL INDUSTRIES

TABLE 47.—*Employment and injury experience at metal mines in the United States and Alaska, 1931–57*

Year	Men working	Average days active	Man-days worked (thousand)	Man-hours worked (thousand)	Injuries		Injury—frequency rates	
					Fatal	Nonfatal	Fatal	Nonfatal
1931	71, 991	232	16, 692	138, 237	147	7, 868	1.06	56.92
1932	46, 602	209	9, 748	80, 213	100	4, 486	1.25	55.93
1933	49, 338	201	9, 913	80, 006	87	5, 180	1.09	64.75
1934	58, 411	219	12, 776	100, 959	108	7, 105	1.07	70.38
1935	83, 975	218	18, 266	145, 134	157	9, 393	1.08	64.72
1936	90, 552	249	22, 521	180, 803	195	13, 606	1.08	75.25
1937	108, 412	252	27, 296	219, 008	206	17, 068	.94	77.93
1938	93, 501	227	21, 255	170, 343	150	11, 996	.88	70.42
1939	102, 279	233	23, 836	189, 554	163	12, 991	.86	68.53
1940	110, 340	241	26, 631	211, 740	209	13, 940	.99	65.84
1941	114, 202	254	29. 034	230, 453	213	14, 590	.92	63.31
1942	[1] 99, 769	280	27, 968	223, 093	215	12, 420	.96	55.67
1943	87, 880	293	25, 790	206, 242	195	11, 533	.95	55.92
1944	70, 413	289	20, 349	163, 027	130	8, 894	.80	54.56
1945	61, 294	288	17, 673	141, 295	96	6, 922	.68	48.99
1946	65, 234	249	16, 238	130, 406	90	7, 345	.69	56.32
1947	71, 228	275	19, 567	157, 024	126	8, 293	.80	52.81
1948	71, 436	282	20, 124	161, 516	104	7, 631	.64	47.25
1949	71, 664	252	18, 067	144, 368	69	6, 940	.48	48.07
1950	68, 292	271	18, 522	147, 765	84	6, 611	.57	44.74
1951	71, 603	278	19, 913	159. 417	95	6, 824	.60	42.81
1952	74, 626	265	19, 770	158. 649	117	6, 684	.74	42.13
1953	72, 529	270	19, 559	156, 605	92	6, 164	.59	39.36
1954	66, 610	245	16, 294	130, 488	86	4, 994	.66	38.27
1955	65, 143	263	17, 113	136, 950	79	5, 837	.58	42.62
1956	68, 273	264	18, 017	144, 407	89	5, 475	.62	37.91
1957	68, 457	259	17, 751	142, 181	71	4, 554	.50	32.03

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[1] Fluorspar mines previously included with lead-zinc data for the Mississippi Valley States, now included with nonmetal mines.

U.S. GOVERNMENT PRINTING OFFICE: 1960